CERTIFICATE AS TO PARTIES, RULINGS AND RELATED CASES

A. Parties, Intervenors and *Amici Curiae*

The following is a list of all parties, intervenors and *amici* who appeared in the United States District Court for the District of Columbia, and all persons who are parties or *amici* in this Court.

1. Parties

Microsoft Corporation (Defendant-Appellant), United States of America (Plaintiff-Appellee), State of New York (Plaintiff-Appellee), State of California (Plaintiff-Appellee), State of Connecticut (Plaintiff-Appellee), District of Columbia (Plaintiff-Appellee), State of Florida (Plaintiff-Appellee), State of Illinois (Plaintiff-Appellee), State of Iowa (Plaintiff-Appellee), State of Kansas (Plaintiff-Appellee), State of Kentucky (Plaintiff-Appellee), State of Louisiana (Plaintiff-Appellee), State of Maryland (Plaintiff-Appellee), Commonwealth of Massachusetts (Plaintiff-Appellee), State of Michigan (Plaintiff-Appellee), State of Minnesota (Plaintiff-Appellee), State of New Mexico (Plaintiff-Appellee), State of North Carolina (Plaintiff-Appellee), State of Ohio (Plaintiff-Appellee), State of Utah (Plaintiff-Appellee), State of West Virginia (Plaintiff-Appellee) and State of Wisconsin (Plaintiff-Appellee).

The State of South Carolina was a plaintiff in the district court but withdrew from the case during trial. It is not a party in this Court.

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure and D.C. Circuit Rule 26.1, Microsoft Corporation ("Microsoft") certifies that it has no corporate parents and that no publicly-held company owns 10% or more of Microsoft's stock.

2. Intervenors

The following persons were permitted to intervene in the district court for limited purposes: Bloomberg News, Bristol Technology, Inc., The New York Times Co., Reuters America, Inc., San Jose Mercury News, Inc., The Seattle Times, ZDNET and ZDTV, L.L.C.

3. *Amici Curiae*

The following persons were permitted to participate as *amici curiae* in the district court: Association for Competitive Technology, Robert H. Bork, the Computer & Communications Industry Association, Lawrence Lessig, Robert E. Litan and the Software and Information Industry Association.

By Order dated November 3, 2000, this Court granted the following persons permission to participate as *amici curiae* in this Court: America Online, Inc., Association for Competitive Technology, the Center for the Moral Defense of Capitalism, the Computer & Communications Industry Association, the Computing Technology Industry Association, the Project to Promote Competition & Innovation in the Digital Age, the Software and Information Industry Association, the Association for Objective Law, Lee A. Hollaar, Carl Lundgren and Laura Bennett Peterson.

B. Rulings under Review

The rulings under review are (i) the Final Judgment entered by the district court (Hon. Thomas Penfield Jackson) on June 7, 2000, and (ii) the Order entered by the district court on April 3, 2000 (save the portion of the Order dismissing the DOJ's first claim for relief and the States' fifth claim for relief). The Final Judgment is reported as *United States* v. *Microsoft Corp.*, 97 F. Supp. 2d 59 (D.D.C. 2000) (J.A. 2841). The April 3, 2000 Order, which accompanies the

district court's conclusions of law, is reported as *United States* v. *Microsoft Corp.*, 87 F. Supp. 2d 30 (D.D.C. 2000) (J.A. 2410).

The district court's findings of fact are reported as *United States* v. *Microsoft Corp.*, 84 F. Supp. 2d 9 (D.D.C. 1999) (J.A. 2247). The district court's summary judgment decision is reported as *United States* v. *Microsoft Corp.*, 1998-2 Trade Cas. (CCH) ¶ 72,261 (D.D.C. Sept. 14, 1998) (J.A. 342).

C. Related Cases

This case was previously before this Court as Nos. 98-5399 and 98-5400, which were consolidated on appeal. On August 10, 1998, various media organizations sought permission to attend pre-trial depositions pursuant to the Publicity in Taking Evidence Act of 1913, 15 U.S.C. § 30. The district court granted their motion on August 11, 1998. On January 29, 1999, this Court affirmed the district court's decision. This Court's decision is reported as *United States* v. *Microsoft Corp.*, 165 F.3d 952 (D.C. Cir. 1999).

A closely related case was previously before this Court as No. 97-5343. On October 20, 1997, the DOJ filed a petition seeking to hold Microsoft in civil contempt for violating a consent decree entered on August 21, 1995. On December 11, 1997, the district court declined to hold Microsoft in contempt, but entered a *sua sponte* preliminary injunction and referred the merits of the DOJ's claims to a special master. *United States* v. *Microsoft Corp.*, 980 F. Supp. 537 (D.D.C. 1997). On June 23, 1998, this Court reversed the district court's injunction and issued a writ of mandamus vacating the reference to a special master. This Court's decision is reported as *United States* v. *Microsoft Corp.*, 147 F.3d 935 (D.C. Cir. 1998).

A related case was previously before the United States Court of Appeals for the First Circuit as No. 98-2133. On September 18, 1998, Microsoft subpoenaed the notes and other

research materials collected by Professors Michael A. Cusumano and David B. Yoffie, who wrote a book entitled *Competing on Internet Time: Lessons from Netscape and the Battle with Microsoft*. On October 1, 1998, Microsoft filed a motion to compel the production of those materials in the United States District Court for the District of Massachusetts. That motion was denied. On December 15, 1998, the First Circuit affirmed the denial of Microsoft's motion on the ground that the requested materials were immune from discovery under a so-called "academic research" privilege. That decision is reported as *Cusumano* v. *Microsoft Corp.*, 162 F.3d 708 (1st Cir. 1998).

No other related cases are pending in this Court or any other court.

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(Authorities on which Microsoft chiefly relies are marked with asterisks.)

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GLOSSARY

"Acer"	Acer Inc. Acer is an OEM based in Taipei, Taiwan.
"ActiveX controls"	Small software components that can be downloaded automatically from a server and executed in Web browsing software on a client. ActiveX controls can be used to access a wide range of Windows operating system functionality.
"AIX"	IBM's variant of the UNIX operating system designed to run on IBM's workstations and servers.
"AOL"	America Online, Inc. AOL is the world's largest OLS by a substantial margin and is now the owner of Netscape and its Navigator Web browsing software.
"AOL's proprietary client software"	Software distributed by AOL to current and prospective subscribers, allowing them to access both AOL's proprietary content and the Internet. The current version of AOL's proprietary client software is built on the IE components of Windows.
"APIs"	Application Programming Interfaces. APIs are interfaces exposed by an operating system or other platform software that can be invoked by other software to obtain a wide range of system services, such as displaying text on the video monitor or saving a document to the hard disk.
"Apple"	Apple Computer, Inc. Apple manufactures the Macintosh line of computers and develops and markets the Mac OS operating system that runs on those computers. Apple's Claris subsidiary develops and markets applications for the Mac OS in competition with Microsoft and other third parties.
"Be"	Be Inc. Be develops and markets the BeOS operating system.
"BeOS"	The operating system distributed by Be.
"Beta test version"	A version of a software product provided to numerous third parties to enable them to test the product in a wide variety of real-world situations prior to the product's commercial release. Beta testers agree to use software products still under development and to provide bug reports and other feedback to the developer. Beta testing typically follows extensive internal tests referred to as alpha testing.

"Caldera"	Caldera Systems, Inc. Caldera distributes a version of the Linux operating system with various added features.
"CBS SportsLine"	A sports Web site published by SportsLine.com, Inc. CBS SportsLine was one of the 24 ICPs that participated in Microsoft's now-discontinued Channel Bar.
"Channel Bar"	A feature of Windows that allowed users automatically to download information from specified Web sites at preset times. The downloaded information was cached to the hard disk so that it could be viewed at a later time.
"Chicago"	Code name for Windows 95 during its development.
"Client"	The "client" element of a client/server architecture. Typically, a client is a PC, workstation or non-PC device, such as a handheld computer.
"Compaq"	Compaq Computer Corp. Compaq is an OEM based in Houston, Texas.
"CompuServe"	CompuServe Interactive Services. CompuServe is an OLS and is now a wholly-owned subsidiary of AOL.
"Consent Decree"	Final judgment entered in *United States* v. *Microsoft Corp.*, Civil Action No. 94-1564 on August 21, 1995 and reported at 1995-2 Trade Cas. (CCH) ¶ 71,096 (D.D.C. Aug. 21, 1995).
"Consent Decree Case"	Civil contempt proceeding brought against Microsoft by the DOJ on October 20, 1997 for alleged violations of the Consent Decree. Although the district court declined to hold Microsoft in contempt, it entered a *sua sponte* preliminary injunction requiring Microsoft to offer Windows 95 to OEMs without the IE components of the operating system. *United States* v. *Microsoft Corp.*, 980 F. Supp. 537, 545 (D.D.C. 1997). On June 23, 1998, this Court reversed the district court's preliminary injunction. *United States* v. *Microsoft Corp.*, 147 F.3d 935, 956 (D.C. Cir. 1998).
"DEC"	Digital Equipment Corp. DEC was a leading manufacturer of minicomputers and other computer hardware. DEC was acquired by Compaq in 1998.
"Dell"	Dell Computer Corp. Dell is an OEM based in Austin, Texas.

"DirectX"	The multimedia subsystem of Windows operating systems. DirectX enables users to view multimedia content on their computers using the Windows Media Player. The system services provided by DirectX are also exposed via APIs to third-party applications running on Windows.
"Disney"	The Walt Disney Co. Disney's Web site was one of the 24 ICPs that participated in Microsoft's now-discontinued Channel Bar.
"DOJ"	Antitrust Division of the U.S. Department of Justice.
"Dynamic HTML"	Extensions to HTML that permit the creation of Web pages that change over time or react to input from the user without having to be refreshed from the server.
"EarthLink"	EarthLink, Inc. EarthLink is an ISP and was one of the ten participants in the Windows 95 Referral Server program.
"Encompass"	A Web browser "shell" developed by Encompass, Inc. that relies on system services supplied by the IE components of Windows. Encompass, Inc. was acquired by Yahoo! Inc. on May 27, 1999.
"Excel"	Excel is a spreadsheet application developed and marketed by Microsoft. Excel is part of the Office suite of business productivity applications.
"FF"	Findings of fact issued by the district court on November 5, 1999 and reported at 84 F. Supp. 2d 9 (D.D.C. 1999).
"First Wave Agreements"	Agreements that Microsoft entered into with various ISVs during the development of Windows 98 and Windows NT 5.0 (later renamed Windows 2000) to encourage them to use the innovative features and functionality of these new operating systems in their products.
"Fujitsu"	Fujitsu Ltd. Fujitsu is an OEM based in Tokyo, Japan.
"Gateway"	Gateway, Inc. Gateway is an OEM based in North Sioux City, South Dakota.
"Hewlett-Packard"	Hewlett-Packard Co. Hewlett-Packard is an OEM based in Palo Alto, California.
"Hitachi"	Hitachi, Ltd. Hitachi is an OEM based in Tokyo, Japan.

"HTML"	HyperText Mark-up Language. HTML is most commonly known as the language used to create documents on the World Wide Web. HTML is a tag-based language that specifies the attributes and layout of text, graphics and other elements of a Web page. Given its flexibility in displaying information, HTML is increasingly used for the user interfaces of operating systems and applications.
"HTTP"	HyperText Transfer Protocol. HTTP is a networking protocol used for transmitting data (text, graphics, sound, video, etc.) over the Internet. HTTP is now also commonly used to transmit data within enterprises over corporate intranets.
"IAPs"	Internet Access Providers. Plaintiffs use the term IAPs to refer collectively to both ISPs and OLSs.
"IBM"	International Business Machines Corp. IBM is a leading supplier of a broad range of computer hardware and software based in Armonk, New York. IBM is, among other things, an OEM.
"ICPs"	Internet Content Providers. ICPs are entities that provide content and applications to users of the Internet by maintaining Web sites.
"ICW"	Internet Connection Wizard. The ICW is a feature introduced in OSR 2.0 of Windows 95 to provide users with step-by-step assistance in establishing a connection to the Internet through an ISP.
"IE"	The Internet Explorer components of Windows operating systems.
"IEAK"	Internet Explorer Administration Kit. The IEAK is a software tool developed by Microsoft that enables ISPs and corporate users to customize IE to meet their particular needs.
"IHVs"	Independent Hardware Vendors. IHVs are entities engaged in developing and marketing computer hardware products such as printers, scanners and video monitors.
"InBox Direct"	A feature that Netscape added to its Navigator Web browsing software that enables users to register with various ICPs and receive daily postings from those ICPs that are delivered directly to the user's e-mail inbox.

"Initial Windows startup sequence"	The sequence of screens that appear when a PC with Windows installed on it is "booted up" for the very first time.
"Intel"	Intel Corp. Intel is the world's leading designer and manufacturer of microprocessors used in PCs.
"Internet"	The world's largest computer network, consisting of millions of different computers ranging from mainframes to handheld devices. These diverse computers use TCP/IP to interoperate with one another. At the heart of the Internet is a backbone of high-speed data communication lines among major host computers. There are thousands of these host computers—commercial, governmental, educational, etc.—that route data and messages to one another.
"Intuit"	Intuit Inc. Intuit is an ISV and the developer of the popular Quicken financial management software. Intuit also was one of the 24 participants in Microsoft's now-discontinued Channel Bar.
"ISPs"	Internet Service Providers. ISPs provide their subscribers with a connection to the Internet via telephone, cable or satellite, typically in exchange for a monthly fee.
"ISVs"	Independent Software Vendors. ISVs are entities engaged in developing and marketing software products, including applications, tools and utilities.
"J/Direct"	A native interface developed by Microsoft and made available to ISVs as part of Visual J++ 6.0. J/Direct enables ISVs writing Java programs for Windows to make calls directly to Windows APIs from Java programs running in Microsoft's Java Virtual Machine.
"Java"	The term Java applies to three separate but related concepts: (i) a high-level programming language developed by Sun, (ii) a set of class libraries that provide services to Java programs, and (iii) a runtime called a Java Virtual Machine that executes Java programs. The Java programming language is an object-oriented variant of the C++ programming language that has been simplified to eliminate features like memory pointers that cause common programming errors.
"JavaOS"	An operating system developed jointly by Sun and IBM.

"JNI"	Java Native Interface. A native interface developed by Sun to enable ISVs writing Java programs to make calls directly to APIs exposed by the underlying operating system.
"JVM"	Java Virtual Machine. Software that converts programs written in the Java programming language into intermediate instructions called Java bytecodes and then executes those instructions. JVMs are included with popular operating systems from vendors like Apple, Hewlett-Packard, IBM, Microsoft and Novell.
"Linux"	An operating system whose kernel was created in 1991 by Linus Torvalds, a Finnish graduate student, and subsequently expanded and improved on a cooperative basis by software developers around the world.
"Mac OS"	Apple's operating system for Macintosh computers.
"Microsoft"	Microsoft Corporation.
"Mosaic"	Web browsing software developed at the National Center for Supercomputing Applications at the University of Illinois and licensed by Microsoft from Spyglass, Inc.
"MS-DOS"	Microsoft Disk Operating System. Released in 1981, MS-DOS was Microsoft's first operating system. MS-DOS had a character-based user interface that required users to type specific instructions at a command prompt to perform tasks. Along with CP/M and UCSD P-System, MS-DOS was one of three operating systems made available to purchasers of the first IBM PC.
"MSHTML.DLL"	The IE component of Windows that enables the operating system to "parse" and "render" information written in HTML so that it can be displayed on the screen. Through published APIs, this system service allows any ISV to embed into its products the ability to display HTML.
"MVS"	Multiple Virtual Storage. MVS is an operating system designed by IBM for use with its mainframe computers, later expanded and renamed OS/390. MVS is capable of managing very large amounts of memory and hard disk space.

“My Computer”	An icon on the Windows desktop that enables a user to open a browsing window that may be used to access files stored “locally” on floppy diskettes, CD-ROM drives and the hard drive built into a computer, or “remotely” on “local area networks,” “wide area networks” and the Internet.
“Navigator”	Web browsing software developed by Netscape. Netscape and Navigator are now owned by AOL.
“NeoPlanet”	A Web browser “shell” developed by NeoPlanet, Inc. that relies on Internet-related system services supplied by the IE components of Windows.
“Netcaster”	Netcaster was Netscape’s response to Microsoft’s Channel Bar. Netcaster was another implementation of push technology that delivers specified Internet content to a user’s computer on a periodic basis. As with the Channel Bar, the user could view content downloaded by Netcaster even when the user was not connected to the Internet.
“Netcom”	Netcom On-Line Communication Services Inc. Netcom was an ISP and one of the ten participants in the Windows 95 Referral Server program. In February 1999, Netcom was acquired by MindSpring Enterprises Inc. MindSpring and EarthLink merged in February 2000.
“Netscape”	Netscape Communications Corp. A company co-founded by Marc Andreessen and Jim Clark that developed the first commercially successful Web browsing software. Netscape is now owned by AOL.
“Novell”	Novell, Inc. Novell develops and markets the IntranetWare and NetWare 5.0 server operating systems that are used in networks with various client operating systems, including Windows 95 and Windows 98.
“NSP”	Native Signal Processing. NSP is the name Intel gave to a group of software products designed to consume additional microprocessor cycles and thereby spur demand for more advanced Intel products. NSP narrowly refers to the ability of Intel microprocessors to process certain digital signals internally rather than through the use of an external device known as a digital signal processor or DSP. As originally designed by Intel in 1995, NSP software was incompatible with both Windows 95 and Windows NT.
“O’Hare”	Code name for IE during the development of Windows 95.

"Oblix"	Oblix, Inc. Oblix is an ISV that develops Internet management software.
"OEMs"	Original Equipment Manufacturers. OEMs are manufacturers or assemblers of personal computers.
"Office"	Microsoft Office is a suite of business productivity applications developed by Microsoft that includes, among other things, Microsoft Excel spreadsheet software and Microsoft Word word processing software.
"OLSs"	Online Services. OLSs provide their subscribers with a connection to the Internet as well as proprietary content and services like e-mail and personal Web pages.
"OLS folder"	A folder that appears on the Windows desktop of Windows 95 and Windows 98. The OLS folder contains icons for the proprietary client software of several OLSs, including AOL. Clicking on one of these icons initiates the process of signing up for the OLS's service.
"OpenServer"	An operating system distributed by SCO.
"OS/2"	An operating system originally released in 1987 with both client and server versions that ran on Intel microprocessors. Jointly developed by Microsoft and IBM, OS/2 was intended to replace MS-DOS as a more robust platform for running business applications. IBM and Microsoft terminated their joint development agreement in the early 1990s, and IBM developed later versions of OS/2 on its own.
"OSR"	OEM Service Release. OSRs are interim releases of Windows made available to OEMs to provide them with the latest improvements to the operating system between major operating system releases.
"Packard Bell/NEC"	Packard Bell NEC, Inc. Packard Bell/NEC was an OEM based in Woodland Hills, California. Packard Bell/NEC is no longer selling PCs in the United States.
"PC"	Personal Computer.
"PC-DOS"	Personal Computer Disk Operating System. PC-DOS is a character-based operating system distributed by IBM. Because IBM had a source code license to MS-DOS from Microsoft pursuant to the companies' joint development agreement, PC-DOS is essentially a replica of MS-DOS.

“Portal Web site”	A large Web site that offers an array of content and services, such as search engines, Web-based e-mail and calendars, photo sharing and online shopping. Yahoo.com and Netcenter (Netscape.com) are examples of portal Web sites.
“Quicken”	Financial management software developed by Intuit.
“QuickTime”	The multimedia subsystem of the Mac OS that Apple later ported to Windows and other operating systems. QuickTime can be used to create, edit, publish and play back multimedia content. Unlike DirectX, QuickTime for Windows does not expose multimedia-related system services to third-party applications running on Windows.
“RBOCs”	The Regional Bell Operating Companies (*e.g.*, Ameritech, Bell Atlantic, BellSouth, Pacific Bell and Southwestern Bell) as they existed at the time of trial.
“RealNetworks”	RealNetworks, Inc. RealNetworks develops streaming media playback software, which enables users to send and receive audio, video and other multimedia content across the Web and begin viewing that content before the file containing that content has been fully downloaded.
“Red Hat”	Red Hat, Inc. Red Hat distributes a version of the Linux operating system with various added features.
“RMI”	Remote Method Invocation. A technology developed by Sun that permits different programs written in Java to share computing tasks, either on the same computer or across a network.
“RNA”	Remote Network Access. Functionality included in Windows 95 that provided a method for PCs to connect to remote computers via a modem and a telephone line. The IE components of Windows used this RNA functionality to communicate with certain types of ISPs. At the request of Netscape and other vendors of Web browsing software, Microsoft exposed the RNA functionality through a series of published APIs.
“SCO”	The Santa Cruz Operation, Inc. SCO developed and marketed the UnixWare and OpenServer operating systems. SCO recently entered into an agreement to sell those two operating systems to Caldera.

“Scripting tool”	A piece of software used to create a list of commands to the operating system, called a script, that can be executed without any intervention by the user.
“Server”	A server is a computer on a network that provides particular resources to clients, such as access to files and printers. For example, a file server is a computer on which users can store files. Web sites are hosted on servers.
“SHDOCVW.DLL”	The IE component of Windows that enables the operating system to provide basic functionality associated with browsing, such as “Back” and “Forward” buttons and a list of “Favorite” information sources. This component supplies the user interface elements of various browsing windows displayed in Windows 98 (such as “Internet Explorer” and “Windows Explorer”). It also generates the customizable Start menu on the Windows desktop. Through published APIs, this system service allows any ISV to embed into its products basic functionality associated with browsing.
“SmartSuite”	A suite of business productivity applications developed and marketed by IBM that includes, among other things, Lotus 1-2-3 spreadsheet software.
“Solaris”	A variant of UNIX developed and marketed by Sun. Sun has versions of Solaris for SPARC, Intel and PowerPC microprocessors.
“Sony”	Sony Electronics Inc. Sony is an OEM based in Tokyo, Japan.
“Spyglass”	Spyglass Inc. Spyglass held the legal rights to the Mosaic Web browsing software developed at the National Center for Supercomputing Applications at the University of Illinois. Microsoft licensed Mosaic from Spyglass in 1994.
“States”	The states that filed suit against Microsoft on May 18, 1998: California, Connecticut, Florida, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, New Mexico, New York, North Carolina, Ohio, South Carolina, Utah, West Virginia, Wisconsin and the District of Columbia. South Carolina withdrew from the action during trial.

"Sun"	Sun Microsystems, Inc. Sun develops and markets (i) proprietary SPARC microprocessors, (ii) a wide range of computer hardware (including workstations and servers); (iii) operating systems (including Solaris and JavaOS), and (iv) middleware and applications (from its iPlanet joint venture with AOL). Sun supplies customers with a tightly integrated set of components that are designed, developed and tested to work well together.
"System Service"	Functionality supplied by an operating system or other platform software that is made available through APIs for use by third-party applications.
"Surf Monkey"	A Web browser "shell" for young children developed by SurfMonkey.com, Inc. that relies on Internet-related system services supplied by the IE components of Windows.
"TCP/IP"	Transmission Control Protocol/Internet Protocol. TCP/IP is the suite of networking protocols used to connect computers together on the Internet. TCP/IP support is built into all modern operating systems—including Windows and UNIX variants—making it the *de facto* standard for transmitting data over networks. Even network operating systems that utilize their own proprietary protocols, such as Novell's NetWare, also support TCP/IP.
"Toshiba"	Toshiba Corp. Toshiba is an OEM based in Tokyo, Japan.
"UNIX"	A multiuser, multitasking operating system originally created at AT&T's Bell Laboratories for use on minicomputers. UNIX can be used on a variety of different microprocessors, including Sun's SPARC microprocessors. There are numerous variants of UNIX developed for particular hardware platforms. Leading UNIX variants include Sun's Solaris, IBM's AIX, Hewlett-Packard's HP-UX, Compaq's Tru64 UNIX, and SCO's OpenServer and UnixWare.
"UnixWare"	An operating system developed and marketed by SCO.
"URLMON.DLL"	The IE component of Windows that enables the operating system to locate information on the Internet or a corporate intranet using URLs. Through published APIs, this system service allows any ISV to embed into its products the ability to locate information on the Internet or a corporate intranet using URLs.

"URLs"	Uniform Resource Locators. URLs are addresses used to locate information on the Internet or a corporate intranet, similar to a file location on a local hard drive. URLs can refer to static Web pages as well as to applications (scripts). URLs are made up of a protocol type, a hostname and an optional pathname. http://www.microsoft.com is a URL that uses HTTP to access Microsoft's Web site.
"Visual J++ 6.0"	Software development tools created by Microsoft that assist ISVs in writing software programs in the Java programming language. These tools can be used to write either Windows-specific Java applications or cross-platform Java applications.
"WebView"	A Windows 98 feature that provides users with a richer view of locally-stored files, enabling them, for example, to see a "thumbnail" preview of a digital photograph or the first page of a PowerPoint slide presentation or an Excel spreadsheet by highlighting the name of the file.
"Windows"	A diverse family of operating systems developed by Microsoft, including Windows 3.0, Windows 3.1, Windows for Workgroups 3.1, Windows 95, Windows 98, Windows Millennium, Windows NT Workstation and Windows NT Server (versions 3.1, 3.51 and 4.0), Windows 2000 Professional and Windows 2000 Server, and Windows CE. Windows operating systems provide a graphical user interface that permits users to perform tasks by clicking icons on the screen using a mouse or other pointing device.
"Windows 2000 Professional"	A new client operating system developed by Microsoft that was commercially released in February 2000. Windows 2000 Professional is built on Windows NT technology and is targeted primarily at business customers.
"Windows 2000 Server"	A new server operating system developed by Microsoft that was commercially released in February 2000. Windows 2000 Server is the successor to Microsoft's Windows NT Server 4.0 operating system. More advanced versions of the operating system are Windows 2000 Advanced Server and the upcoming Windows 2000 Datacenter Server.
"Windows 3.0"	A client operating system developed by Microsoft that was commercially released in May 1990. Windows 3.0 was the first commercially successful version of Windows.

"Windows 95"	A client operating system developed by Microsoft that was commercially released in August 1995. Windows 95 incorporated the functionality of MS-DOS and Windows 3.1 in a 32-bit operating system with a range of new features and functionality. Windows 95 was updated with various interim releases, called OSRs, that were provided by Microsoft to OEMs.
"Windows 95 Referral Server"	A program created by Microsoft in August 1996 concurrent with inclusion of the ICW in OSR 2.0 of Windows 95 to make it easier for users to establish a connection to the Internet. The ICW connected users automatically to the Referral Server, enabling users to choose from among a list of ISPs that participated in the Referral Server program.
"Windows 98"	A client operating system developed by Microsoft that was commercially released in June 1998. Windows 98 is an improved version of Windows 95 that includes a range of new features and functionality. Windows 98 has been updated by interim releases provided to OEMs.
"Windows CE"	A small operating system developed by Microsoft for use in, *inter alia*, handheld devices and television set-top boxes.
"Windows Explorer"	A feature of the Windows 98 user interface that enables users to move seamlessly in the same browsing window between files stored on their hard drive, on an external disk drive, on a local or wide area network or on the Internet using the navigational paradigms of the Web (*e.g.*, "Back" and "Forward" buttons, a list of "Favorite" information sources and a "History" of recently-accessed information).
"Windows Millenium"	A client operating system developed by Microsoft that was commercially released in September 2000. Windows Millenium is an improved version of Windows 98 targeted primarily at home users.

“Windows NT”	An operating system developed by Microsoft that was first commercially released in 1992. Windows NT has a fundamentally different architecture than Windows 95, Windows 98 and Windows Millennium. The three principal versions of Windows NT (3.1, 3.51 and 4.0) were targeted primarily at business customers. Windows NT is the predecessor of Windows 2000.
“Windows Resource Kit”	Documentation and utilities provided by Microsoft to information technology professionals to assist them in deploying, supporting and understanding Windows 95. The resource kit is a technical resource that supplements the documentation included with Windows 95.
“Windows Update”	A feature of Windows 98 that automatically detects when new enhancements to the operating system have not been installed on a user’s computer and allows the user to download such enhancements easily from a Microsoft Web site.
“WININET.DLL”	The IE component of Windows that enables the operating system to retrieve data from the Internet or other remote storage locations (such as servers on a corporate intranet) using Internet protocols like HTTP. Through published APIs, this system service allows any ISV to embed into its products the ability to retrieve data from the Internet.
“Word”	Microsoft Word is a word processing software program developed by Microsoft. Word is part of the Office suite of business productivity applications.
“World Wide Web”	An element of the broader Internet, the World Wide Web (typically referred to as the Web) utilizes hyperlinking, a form of non-sequential text retrieval, to allow users to navigate among documents. The navigational paradigms of the Web include “Back” and “Forward” buttons, a list of “Favorite” Web pages and a “History” of recently accessed Web pages.

WITNESSES AND DEPONENTS REFERRED TO IN THE BRIEF

James Allchin	Senior Vice President of the Personal and Business Systems Group at Microsoft at the time of trial and now Group Vice President of the Platforms Product Group at Microsoft. Microsoft's third witness at trial.
Marc Andreessen	Executive Vice President of Products and Marketing at Netscape at the time of trial and now Chairman of Loudcloud, a company supplying startup packages to electronic commerce companies. Deponent only.
James Barksdale	President and CEO of Netscape at the time of trial and now a Partner of The Barksdale Group, a firm that advises, finances and services new Internet companies. Plaintiffs' first witness at trial.
Stephen Case	Chairman and CEO of AOL. Deponent only.
Brad Chase	Vice President of Marketing and Software Developer Relations in the Personal and Business Systems Group at Microsoft at the time of trial and now Senior Vice President in charge of The Microsoft Network. Microsoft's seventh witness at trial.
James Clark	Co-founder and formerly Chairman and CEO of Netscape and now Chairman of myCFO, a firm that provides financial advisory services to wealthy individuals. Deponent only.
David Colburn	Senior Vice President of Business Affairs at AOL at the time of trial and now President of Business Affairs at AOL. Plaintiffs' second witness at trial and (as an adverse witness) Microsoft's first rebuttal witness.
Michael Devlin	President of Rational Software Corp. Microsoft's fourth witness at trial.
Eric Engstrom	Acting General Manager of the Windows Client and Collaboration Division, Multimedia, at Microsoft at the time of trial and now Chairman of Catalytic Software, Inc., a company creating a "just-in-time" software development infrastructure. Microsoft's tenth witness at trial.
Gordon Eubanks	CEO of Oblix and formerly CEO of Symantec Corp. Microsoft's second rebuttal witness.

David Farber	Alfred Fitler Moore Professor of Telecommunications Systems at the Moore School of Engineering of the University of Pennsylvania. Plaintiffs' ninth witness at trial.
Edward Felten	Assistant Professor of Computer Science at Princeton University. Plaintiff's tenth witness at trial and plaintiffs' third rebuttal witness.
Franklin Fisher	Professor of Economics at MIT. Plaintiffs' twelfth witness at trial and plaintiffs' first rebuttal witness.
James Gosling	Vice President and Chief Scientist of the Java Software Division of Sun. Plaintiffs' eighth witness at trial.
William Harris, Jr.	CEO of Intuit at the time of trial. Plaintiffs' eleventh witness at trial.
Joachim Kempin	Senior Vice President of the OEM Sales Group at Microsoft. Microsoft's eleventh witness at trial.
Paul Maritz	Group Vice President of Platforms and Applications at Microsoft at the time of trial and now a consultant to Microsoft on strategic and business issues. Microsoft's second witness at trial.
Steven McGeady	Vice President of the Content Group at Intel at the time of trial and now Vice President of the New Business Group at Intel. Plaintiffs' fourth witness at trial.
Robert Muglia	Senior Vice President of the Applications and Tools Group at Microsoft at the time of trial and now Group Vice President of the .NET Services Group at Microsoft. Microsoft's twelfth witness at trial.
Cameron Myhrvold	Vice President of the Internet Customer Unit, Strategic Relationships at Microsoft at the time of trial and now a Managing Director of Ignition Corp., an investment firm specializing in wireless Internet technologies. Microsoft's sixth witness at trial.
Garry Norris	Program Director of Sales and Marketing for Network Interface Cards at IBM. Plaintiffs' second rebuttal witness.
William Poole	Senior Director of Business Development for Windows at Microsoft at the time of trial and now Vice President of the Windows Digital Media Division at Microsoft. Microsoft's fifth witness at trial.

Thomas Reardon	Program Manager in the Interactive Media Group at Microsoft at the time of trial and now CEO of Avogadro, Inc., a company developing technology to connect the wired and wireless Internets. Deponent only.
John Rose	Senior Vice President and Group General Manager of the Enterprise Computing Group at Compaq at the time of trial. Microsoft's eighth witness at trial.
Daniel Rosen	General Manager of New Technology at Microsoft at the time of trial and now a Partner of Frazier Technology Ventures, a venture capital fund. Microsoft's ninth witness at trial.
Richard Schmalensee	Gordon Y Billard Professor of Economics and Dean of the Sloan School of Management at MIT. Microsoft's first witness at trial and Microsoft's third rebuttal witness.
Brad Silverberg	Senior Vice President of the Applications and Internet Client Group at Microsoft at the time of trial and now CEO of Ignition Corp., an investment firm specializing in wireless Internet technologies. Deponent only.
Benjamin Slivka	General Manager in the Windows Group at Microsoft at the time of trial and now Director of Information Technology at Amazon.com. Deponent only.
John Soyring	Director of Network Computing Software Services at IBM at the time of trial and now Vice President of E-Business Operating System Solutions at IBM. Plaintiffs' sixth witness at trial.
Avadis Tevanian, Jr.	Senior Vice President of Software Engineering at Apple. Plaintiffs' third witness at trial.
Scott Vesey	Windows Web Browser Product Manager at The Boeing Company. Deponent only.
Frederick Warren-Boulton	A Principal with Microeconomic Consulting and Research Associates, Inc. Plaintiffs' seventh witness at trial.
Glenn Weadock	An independent software consultant. Plaintiffs' fifth witness at trial.
Ron Whittier	General Manager of the Content Group at Intel at the time of trial and now Senior Vice President and General Manager of the Interactive Media Sources Group at Intel. Deponent only.

JURISDICTION

Microsoft appeals from a final judgment entered on June 7, 2000 (i) holding it liable under Sections 1 and 2 of the Sherman Act and corresponding state-law provisions and (ii) entering far-reaching relief, including a breakup of the company. The district court had subject matter jurisdiction under 15 U.S.C. § 4 and 28 U.S.C. §§ 1331, 1337 and 1367(a). Microsoft filed its notices of appeal on June 13, 2000. This Court has jurisdiction under 28 U.S.C. § 1291.

STATEMENT OF THE ISSUES

1. Whether Microsoft's design of its Windows operating systems to include Web browsing software constituted a tie in violation of Section 1 of the Sherman Act and corresponding state-law provisions.

2. Whether Microsoft maintained a monopoly in the alleged market for "Intel-compatible PC operating systems" through anticompetitive conduct—principally its design of Windows and its promotion and distribution agreements with Internet access providers—in violation of Section 2 of the Sherman Act and corresponding state-law provisions.

3. Whether Microsoft attempted to monopolize the alleged market for "Web browsers" through anticompetitive conduct in violation of Section 2 of the Sherman Act and corresponding state-law provisions.

4. Whether the extreme and unwarranted relief entered by the district court without conducting an evidentiary hearing and without permitting Microsoft to develop and present evidence must be reversed.

5. Whether the district court's handling of the case (*e.g.*, its failure to provide Microsoft with adequate time for discovery and to prepare for trial, its limitation on the number

of witnesses, its use of "summary witnesses" and the resulting admission of large amounts of inadmissible hearsay) requires that the judgment be vacated.

6. Whether the district judge's public statements about the merits of the case require that the judgment be vacated and the district judge disqualified from any further proceedings.

STATEMENT OF THE CASE

This case arises out of Microsoft's competition with Netscape from 1995 to 1998—the so-called "browser war." In competing with Netscape to satisfy increasing demand for Internet functionality, Microsoft (i) developed new versions of its Windows operating system that included Internet technologies, (ii) distributed those technologies widely, and (iii) encouraged third parties to design their software products to take advantage of those technologies. Consumers clearly benefited from this competition. As the district court found, Microsoft's conduct contributed significantly to (i) improving the quality of Web browsing software, (ii) lowering its cost, and (iii) increasing its availability. Microsoft's inclusion of Internet technologies in Windows also benefited the thousands of software developers that create applications that run on the operating system. At the same time, nothing Microsoft did limited Netscape's ability to compete: Netscape's Web browsing software remained "fully interoperable" with Windows, and Netscape had unimpeded access to "every PC user worldwide." In fact, Netscape's customer base grew dramatically during the period in question. To sanction Microsoft for improving its products and promoting and distributing them vigorously—as the district court did—would stifle innovation and chill competition, contrary to the purposes of the antitrust laws.

The proceeding below went badly awry from the outset. When this case was filed in May 1998, then Assistant Attorney General Joel Klein said that the DOJ had embarked on a "surgical strike," challenging Microsoft's inclusion of Web browsing software in Windows. Steve Lohr,

U.S. v. Microsoft: The Case, N.Y. TIMES, May 19, 1998, at A1. Over the next two years, however, the district court permitted plaintiffs to transform their case beyond recognition. As a result, what began as an attack on Microsoft's addition of Internet technologies to Windows ended with an unprecedented order breaking up the company—a completely unjustified outcome that no one could have imagined at the outset.

The district judge's extensive public comments about the merits of the case epitomize his disregard for proper procedure. The day after judgment was entered, news organizations began publishing stories based on interviews with the district judge. Two *New York Times* reporters, who liberally quoted the district judge in a recently-published book, disclosed that he granted them interviews "during the trial on the condition that his comments not be used until the case left his courtroom." JOEL BRINKLEY & STEVE LOHR, U.S. V. MICROSOFT 6 (2000). These "friendly, informal and unstructured" discussions were described as "a rare audience with a sitting judge during the course of a trial." Joel Brinkley & Steve Lohr, *Retracing the Missteps in the Microsoft Defense*, N.Y TIMES, June 9, 2000, at C8. Following entry of judgment, the district judge embarked on a speaking tour, appearing at antitrust conferences here and abroad to discuss his views of Microsoft and his reasons for breaking up the company. The district judge's public comments would lead a reasonable observer to question his impartiality and—together with other procedural irregularities—the fairness of the entire proceeding.

A. The Claims

On May 18, 1998, the DOJ and States filed separate complaints and motions for a preliminary injunction, alleging that Microsoft violated Sections 1 and 2 of the Sherman Act. The States also alleged violations of their antitrust laws. (Sections 1 and 2 of the Sherman Act and the States' antitrust statutes are set forth in a separately-bound addendum.) Plaintiffs' complaints

contended that Microsoft unlawfully foreclosed Netscape from offering its Web browsing software, called Navigator, in an effort to protect Microsoft's putative PC operating system monopoly. Plaintiffs asserted that Navigator could have become a competing "platform" to which applications like spreadsheets and word processors could be written, thus potentially reducing what plaintiffs viewed as the sole barrier to entry into the operating system business. J.A. 139-40, 141-42, 160-61; J.A. 299-300. This so-called "applications barrier to entry" allegedly results from Microsoft's success in encouraging independent software vendors ("ISVs") to create a large number of applications designed to run on Microsoft's platform—Windows. J.A. 139; J.A. 299-300.

Plaintiffs asserted two claims under Section 1. First, they alleged that Microsoft tied its Web browsing software, Internet Explorer ("IE"), to its Windows operating system. J.A. 186; J.A. 315-16. This claim was the focal point of their complaints. J.A. 144-46, 173-84, 186; J.A. 302-03, 304-08, 315-16. The alleged purpose and effect of this purported tie were "to foreclose competing browsers" from distribution by computer manufacturers ("OEMs"). J.A. 186. Second, plaintiffs alleged that Microsoft entered into unlawful exclusive dealing contracts with Internet service providers ("ISPs"), online services ("OLSs") and Internet content providers ("ICPs") for the promotion and distribution of IE. J.A. 185-86; J.A. 316. Plaintiffs further alleged that Microsoft's license agreements with OEMs were "exclusionary" because they did not allow OEMs to make modifications to Windows that purportedly would have made users more likely to use Navigator. J.A. 169-72, 185-86; J.A. 316.

Plaintiffs also asserted two claims under Section 2. First, they alleged that Microsoft unlawfully maintained a monopoly in a market for "PC operating systems." J.A. 187; J.A. 314. Second, they alleged that Microsoft attempted to monopolize a market for "Internet browsers."

J.A. 187; J.A. 314-15. Plaintiffs premised their Section 2 claims on the same conduct that underlay their Section 1 claims. J.A. 163-84; J.A. 304-11. Their only additional allegation of anticompetitive conduct under Section 2 was their contention that Microsoft attempted on June 21, 1995 (without success) to induce Netscape not to compete in the alleged "Internet browser" market. J.A. 162; J.A. 302.

The relief requested by plaintiffs likewise focused on distribution and promotion of Web browsing software. As the district court noted, plaintiffs sought to enjoin Microsoft from:

> (1) entering into or enforcing certain contractual provisions which allegedly foreclose distribution and/or promotion of competing Internet browsers; (2) distributing a "bundled" version of its operating system and browser unless Microsoft provides a practical way of removing browser functions and provides OEMs that do not wish to license the browser an appropriate deduction from the royalty fee; (3) distributing a "bundled" version of its operating system and browser unless Microsoft treats Netscape Corporation's ("Netscape") browser the same as its own with respect to inclusion and removal; and (4) retaliating against any OEM that chooses to remove Microsoft's browser from Windows 98.

1998-2 Trade Cas. (CCH) ¶ 72,261, at 82,668 (D.D.C. Sept. 14, 1998). Plaintiffs did not mention, much less seek, dissolution of Microsoft or any of the other extreme relief ultimately awarded.

B. Pretrial Proceedings

The district court advanced trial on the merits and consolidated it with the hearing on plaintiffs' preliminary injunction motions. J.A. 227. Over Microsoft's objection, the district court scheduled trial to begin on September 8, 1998, less than four months away. J.A. 222-23. The district court also limited each side to 12 "summary witnesses" in its case in chief, required that all direct testimony be filed in writing and imposed strict limits on the use of deposition testimony. J.A. 230; J.A. 242; J.A. 328-31. The district court clearly envisioned an abbreviated trial focused on plaintiffs' tying claim, stating, "I am prepared to devote the month of September to the trial of this case." J.A. 231.

Following this Court's June 23, 1998 decision in the Consent Decree Case—which rendered plaintiffs' tying claim legally untenable—plaintiffs raised a variety of new allegations, seeking to convert their tightly-focused case into an omnibus Section 2 action. This expansion of the case became apparent in August 1998 when, without amending their complaints, plaintiffs began pursuing in discovery new accusations concerning Microsoft's interactions with Sun, Intel, Apple, RealNetworks and IBM. Over Microsoft's objection, the district court pressed ahead with its plan for a highly-expedited trial, assuring Microsoft that it "would not be making any findings" and "would not predicate any relief" on matters unrelated to the conduct challenged in the complaints, J.A. 380, assurances it would later repudiate.

C. The Rulings Below

Despite Microsoft's motion for a continuance, trial began on October 19, 1998, five months after the complaints were filed. The parties concluded their cases-in-chief on February 26, 1999 and presented rebuttal evidence between June 1 and June 24, 1999.

The district court issued findings of fact on November 5, 1999. 84 F. Supp. 2d 9 (D.D.C. 1999). Although 412 paragraphs long, the district court's findings contain *no* citations to the record, making it impossible to ascertain the purported basis for many findings. The most inculpatory "findings" consist of sweeping, conclusory assertions, unfounded inferences and speculative predictions masquerading as "facts." *E.g.*, *id*. at 111-12 (FF 411-12). In commenting to the *New York Times* on the harsh tone of his findings, the district judge explained his judicial philosophy towards Microsoft as follows:

> I like to tell the story of the North Carolina mule trainer . . . . He had a trained mule who could do all kinds of wonderful tricks. One day somebody asked him: "How do you do it? How do you train the mule to do all these amazing things?" "Well," he answered, "I'll show you." He took a 2-by-4 and whopped him upside the head. The mule was reeling and fell to his knees, and the trainer said: "You just have to get his attention." I hope I've got Microsoft's attention.

BRINKLEY & LOHR, *supra* at 278. In making its findings, which adopted nearly all of plaintiffs' factual assertions, the district court ignored vast amounts of uncontradicted evidence submitted by Microsoft on the central issues in the case.

After the failure of an intense four-month mediation before Chief Judge Posner, the district court entered its conclusions of law on April 3, 2000. 87 F. Supp. 2d 30 (D.D.C. 2000). (Holding that the relevant state-law provisions are coterminous with Sections 1 and 2 of the Sherman Act, *id*. at 54-55, the district court reached the same conclusions under federal and state law.)

Tying. The district court held that Microsoft violated Section 1 by tying IE to Windows. *Id*. at 47-51. In so ruling, the district court refused to apply the test set out by this Court in *United States* v. *Microsoft Corp.*, 147 F.3d 935 (D.C. Cir. 1998). Stating that it was obliged to follow this Court's rulings only "until the trail falters," the district court concluded that this Court's "un-demanding test" is "inconsistent with the pertinent Supreme Court precedents," 87 F. Supp. 2d at 47, even though, in formulating its test, this Court expressly distinguished the two cases cited by the district court, *Jefferson Parish Hospital District No. 2* v. *Hyde*, 466 U.S. 2 (1984), and *Eastman Kodak Co.* v. *Image Technical Services, Inc.*, 504 U.S. 451 (1992). 147 F.3d at 946-47, 950.

Exclusive Dealing. The district court rejected plaintiffs' exclusive dealing claim under Section 1, holding that Microsoft's promotion and distribution agreements for IE "did not foreclose enough of the relevant market to constitute a § 1 violation." 87 F. Supp. 2d at 53. The district court explained:

> Microsoft's multiple agreements with distributors did not ultimately deprive Netscape of the ability to have access to *every PC user worldwide* to offer an opportunity to install Navigator. Navigator can be downloaded from the Internet. It is available through myriad retail channels. It can (and has been) mailed directly to an unlimited number of households.

Id. (emphasis added). The district court determined that Netscape was able to distribute 160 million copies of Navigator in 1998 alone, contributing to an increase in Navigator's installed base from 15 million in 1996 to 33 million in December 1998. *Id.* Although distribution foreclosure was also central to plaintiffs' Section 2 claims, the district court contended that the failure of the agreements to foreclose enough of Navigator's distribution "to constitute a § 1 violation in no way detracts from the Court's assignment of liability for the same arrangements under § 2." *Id*.

Monopoly Maintenance. The district court held that Microsoft possesses monopoly power in a market for "Intel-compatible PC operating systems" and that Microsoft maintained that monopoly by anticompetitive means in violation of Section 2. *Id*. at 35-44. According to the district court, Microsoft's alleged monopoly is protected by a single barrier to entry—the "applications barrier to entry." *Id*. at 36. For anticompetitive conduct, the district court relied primarily on Microsoft's purported exclusion of Navigator from two specific channels of distribution—the OEM and Internet access provider ("IAP") channels, *id*. at 39-42—despite finding that Netscape had access to "every PC user worldwide," *id*. at 53. The other challenged acts, while not themselves anticompetitive, were held to have "supplemented Microsoft's efforts in the OEM and IAP channels." *Id*. at 43.

Attempted Monopolization. The district court found that Microsoft attempted to monopolize the "browser" market in violation of Section 2 based largely on the same allegedly anticompetitive conduct. *Id*. at 45-46. Despite acknowledging that Microsoft's intent was to persuade ISVs that Navigator would not emerge as the "standard" Web browsing software, the district court reasoned that Microsoft possessed the requisite specific intent to obtain monopoly power because "there is no evidence that Microsoft tried" to prevent its efforts "from achieving

overkill." *Id*. at 45. The district court also determined that Microsoft's discussions with Netscape in June 1995 created a dangerous probability of monopolization, even though Microsoft had not yet released Windows 95 and thus had *no* share of the alleged "browser" market at the time. *Id*. at 45-46. The district court stated that Microsoft has since "revived the dangerous probability" of monopolization because IE's share of browser usage has "risen above fifty percent," *id*. at 46—even though AOL, which acquired Netscape during trial, could reduce IE's usage share substantially by building AOL's proprietary client software on Navigator instead of IE.

D. The Final Judgment

The district court's order accompanying its conclusions of law stated that it would enter relief "following proceedings to be established by further Order of the Court." *Id*. at 57. The district court thereafter held two chambers conferences to discuss the remedies phase of trial. At both conferences, Microsoft stressed that it could not take a position on the appropriate procedure to be employed until it received notice of plaintiffs' proposed relief. J.A. 2451-53, 2455; J.A. 2467-68. When Microsoft asked whether it "contemplate[d] further proceedings," the district court replied, "Yes. Yes. I would assume that there would be further proceedings," adding that it might "replicate the procedure at trial with testimony in written form subject to cross-examination." J.A. 2445-46, 2448. The district court subsequently issued Scheduling Order No. 8, which required Microsoft to submit only (i) its "summary response" to plaintiffs' proposal, (ii) its "counter-proposal(s)" to the plaintiffs' request, and (iii) its "recommendations for future proceedings on the issue of remedy." J.A. 2471.

On April 28, 2000, plaintiffs filed their proposed decree, together with six lengthy declarations and numerous new exhibits. Although their complaints did not even hint at such draconian relief, plaintiffs requested that Microsoft be broken up. J.A. 2473-74. Plaintiffs' proposed decree

also included equally extreme "conduct" provisions that extended far beyond the case that was tried and encompassed products wholly outside the markets defined by the district court. J.A. 2475-80. For example, plaintiffs requested that Microsoft be required to disclose proprietary information about its desktop, server and embedded operating systems to all firms claiming a desire to make their products "interoperate effectively" with those operating systems, J.A. 2477-78—a group that includes all of Microsoft's competitors.

In its "summary response" to plaintiffs' proposed decree, Microsoft expressly requested discovery and a hearing on relief. J.A. 2587-88; J.A. 2645. By filing six declarations and many new exhibits with their proposed decree, plaintiffs acknowledged that the trial record was insufficient to support their requested relief. Nevertheless, the district court announced on May 24, 2000 that it intended "to proceed to the merits of the remedy." J.A. 9769. When Microsoft asked about further proceedings, the district court responded, "I'm not contemplating any further process." J.A. 9866. Microsoft then filed an offer of proof, supplemented seven days later, summarizing the anticipated testimony of 23 individuals who would testify at a hearing on relief. J.A. 2742; J.A. 2822.

The district court signed plaintiffs' proposed final judgment as ultimately proffered *without a single substantive change*, thus awarding radical relief without conducting an evidentiary hearing or making any findings to justify that relief. 97 F. Supp. 2d 59, 63-74 (D.D.C. 2000). In an accompanying opinion, bereft of a single citation to law or evidence, the district court stated that "a structural remedy has become imperative" because Microsoft "does not yet concede that any of its business practices violated the Sherman Act." *Id*. at 62. Far from finding that the relief entered will increase competition, the district court noted that even "purportedly knowledgeable people" do not know what "may or may not ensue if the proposed final judgment is entered." *Id*.

Explaining its decision not to hold an evidentiary hearing on relief, the district court stated that it "has found testimonial predictions of future events generally less reliable even than testimony as to historical fact, and cross-examination to be of little use in enhancing or detracting from their accuracy." *Id*. In an astounding abdication of judicial responsibility, the district court remarked:

> Plaintiffs won the case, and for that reason alone have some entitlement to a remedy of their choice. Moreover, plaintiffs' proposed final judgment is the collective work product of senior antitrust law enforcement officials of the United States Department of Justice and the Attorneys General of 19 states, in conjunction with multiple consultants. These officials are by reason of office obliged and expected to consider—and to act in—the public interest; Microsoft is not.

Id. at 62-63. The district judge elaborated on his opinion in his discussions with the press, stating, "I am not aware of any case authority that says I have to give them any due process at all. The case is over. They lost." Brinkley & Lohr, N.Y. TIMES, *supra* at C8. He also reportedly remarked, "it's procedurally unusual to do what Microsoft is proposing—are you aware of very many cases in which the defendant can argue with the jury about what an appropriate sanction should be? Were the Japanese allowed to propose the terms of their surrender? The government won the case." John R. Wilke, *For Antitrust Judge, Trust, or Lack of It, Really Was the Issue*, WALL ST. J., June 8, 2000, at A8.

STATEMENT OF FACTS

America's computer industry, the subject of this case, is the envy of the world. It is characterized by falling prices and unprecedented levels of investment and innovation, the opposite of what one would expect if the industry were under the thumb of an oppressive monopolist. J.A. 4223-34; J.A. 3668-70, 3671-80; *see also* J.A. 6390; J.A. 6491-93; J.A. 9384-86. Consumers—the intended beneficiaries of the antitrust laws—have greatly benefited from Microsoft's efforts to offer improved products at attractive prices. J.A. 4323-37; J.A. 3670; *see*

also J.A. 7538-43; J.A. 9449-62; J.A. 11794, 11816; J.A. 13510. Indeed, when asked whether Microsoft had harmed consumers, plaintiffs' own economist, Franklin Fisher of MIT, candidly replied, "[O]n balance, I would think the answer was no, up to this point." J.A. 7297.

The district court nevertheless found that Microsoft violated the antitrust laws by developing and marketing improved versions of Windows in response to demand for Internet-enabled products. Condemning Microsoft's efforts to improve Windows and make those improvements broadly available turns the antitrust laws on their head. To be sure, Microsoft "set out to maximize Internet Explorer's share of browser usage at Netscape's expense," 87 F. Supp. 2d at 39, but that is the essence of competition. What matters is that Microsoft did nothing to prevent Netscape from getting its products into the hands of consumers.

A. Microsoft and the Computer Industry

Unlike other companies in the computer industry such as IBM and Apple, Microsoft has always focused on software. J.A. 3659; 84 F. Supp. 2d at 13 (FF 5). Starting with the emergence of the IBM personal computer ("PC") in 1981, Microsoft became a leading developer of operating systems. *Id*. (FF 6-9). Early on, Microsoft recognized that operating systems that serve as a common "platform" for applications and that run on PCs supplied by a wide range of OEMs would provide enormous consumer benefit. J.A. 3660. In part because of Microsoft's success in developing such platforms, consumers today can choose from tens of thousands of applications and thousands of PC models that are compatible with one another. J.A. 3643, 3660.

1. Operating System Software

There is no universally accepted definition of operating systems because they have evolved over time. J.A. 3300-01; J.A. 5831-33; *see also* J.A. 6784, 6788-89, 6788. At a bare minimum, operating systems serve as the computer's "central nervous system," scheduling the

execution of tasks by the microprocessor and controlling the flow of information within the computer and between the computer and peripheral devices such as printers. J.A. 3300-01; J.A. 9462-63. In response to changes in microprocessor technology and consumer demand, operating system vendors have continually added new features and functionality to their products, often integrating capabilities previously provided by standalone software products. J.A. 3303-04;; *see also* J.A. 9582-84; J.A. 11816; J.A. 13513. For example, in the early 1990s, many firms offered their own implementations of what is known as a TCP/IP stack (the network protocols used to transmit data over the Internet), which they sold for as much as $495 per copy, more than five times the retail price of Windows 98. J.A. 3298-99, 3309. In response to demand for Internet connectivity, however, Microsoft and other firms began including a TCP/IP stack as a standard feature of their operating systems without additional charge. J.A. 3309; J.A. 5833-36.

The principal function of operating systems today is to serve as platforms on which applications (such as spreadsheets or databases) run. 84 F. Supp. 2d at 19-20 (FF 37); J.A. 3727-28; J.A. 3301-02. Applications rely on "system services" provided by operating systems through application programming interfaces ("APIs"). 84 F. Supp. 2d at 12 (FF 2). When an application "calls" a particular API, the operating system supplies the "system service" associated with that API by causing the microprocessor to execute a specified set of instructions. *Id.*; J.A. 3306; J.A. 3525. The availability of such "system services" is highly efficient, freeing ISVs from the need to "reinvent the wheel" by including software code in their products to perform commonly-needed functions. J.A. 3307-08; J.A. 3525-26. ISVs thus can focus on adding innovative features to their products. J.A. 3707-08; J.A. 3307-08.

ISVs need stable and well-defined platforms. J.A. 3703. If OEMs were permitted to modify Windows—installing some parts of it, but not others—ISVs would not know whether the

system services on which their applications rely would be present on any given PC. J.A. 3703; J.A. 3307-08; J.A. 3525-28; J.A. 3617. Microsoft's license agreements with OEMs thus have always provided, consistent with Microsoft's rights under federal copyright law, that OEMs cannot modify Windows without Microsoft's permission. J.A. 3615. In contrast, the UNIX operating system, developed by Bell Laboratories in the 1970s, was allowed to fragment as a platform. J.A. 3704-05. As a result, applications written for one version of UNIX will frequently not run on other versions, making UNIX applications less abundant and more expensive. J.A. 3705; J.A. 3527-28; J.A. 3617.

Modern operating systems perform two other related functions. First, they provide a "user interface," *i.e.*, the means by which a user interacts with a computer. J.A. 3310-12. User interfaces for computers have evolved dramatically, from punch card readers, to teletype terminals, to character-based user interfaces, to graphical user interfaces. J.A. 3310. Second, operating systems enable users to find and view information contained in various storage devices. J.A. 3312-15. These storage devices can be "local," such as a floppy diskette, a CD-ROM drive and the hard drive built into a computer, or "remote," such as "local area networks" that connect computers in a particular office, "wide area networks" that connect computers in geographically separated offices, and the Internet. J.A. 3312, 3316-17; J.A. 11799; J.A. 12061.

In 1981, Microsoft released its first operating system, MS-DOS, which had a character-based user interface that required users to type specific instructions to perform tasks. 84 F. Supp. 2d at 13 (FF 6). In 1985, Microsoft introduced a new product called "Windows" that included a graphical user interface, enabling users to perform tasks by clicking on icons on the screen using a mouse. *Id.* at 13 (FF 7). Although initially just a "shell" running on MS-DOS, Windows assumed more and more operating system functionality over time. *Id.* Windows 3.0, shipped in

May 1990, was the first successful version of Windows. J.A. 4562-63; J.A. 3675; J.A. 3400. In 1995, Microsoft released Windows 95, which integrated the functionality of Windows 3.1 and MS-DOS in a single operating system and "enjoyed unprecedented popularity with consumers." 84 F. Supp. 2d at 13 (FF 8). Microsoft shipped Windows 98, the successor to Windows 95, in June 1998. *Id.*

Many other companies develop and market operating systems, including (i) IBM, which distributes MVS, AIX, OS/2 and PC-DOS; (ii) Apple, which distributes the Mac OS; (iii) Sun, which distributes Solaris and JavaOS; (iv) SCO, which distributes UnixWare and OpenServer; (v) Be, which distributes BeOS; and (vi) Caldera and Red Hat, which distribute Linux. *See* J.A. 4250, 4258; J.A. 3718-27, 3732; J.A. 3391. Some companies also create programs that sit between operating systems and applications. J.A. 3728-29; J.A. 3302. This "middleware" layer can provide system services to applications via APIs, thus serving as a platform for software development and subsuming the primary function of an operating system. J.A. 3728-29; J.A. 3302. Microsoft believed, and the district court found, that Navigator had the potential to develop into such a middleware platform and thus compete with Windows for the attention of ISVs. 84 F. Supp. 2d at 28 (FF 69); *see also* J.A. 12064 (Video).

2. Rapid Technological Change and Inflection Points

Gordon Moore, one of Intel's founders, correctly predicted in 1965 (in what came to be known as "Moore's Law") that microprocessor capabilities would double every 18 to 24 months. J.A. 3673. Dramatic improvements in microprocessors regularly alter the entire competitive landscape of the industry. J.A. 3673. As Intel chairman Dr. Andrew Grove described in his book, *Only the Paranoid Survive: How to Exploit the Crisis Points That Challenge Every Company*, such technological advances—known as "inflection points" or "paradigm shifts"—can quickly

diminish the value of (or eliminate altogether) entire categories of products, making the computer industry inherently unpredictable. J.A. 4223; J.A. 3645-46, 3673-74; J.A. 6398. Hence, the greatest competitive threat to a leading product frequently comes not from another product within the same category, "but rather a technological advance that renders the boundaries defining the category obsolete." 84 F. Supp. 2d at 26 (FF 59).

Microsoft itself was born of an inflection point—the emergence of PCs in a world previously dominated by expensive mainframes and minicomputers. J.A. 3646, 3674-75. Established companies like IBM and DEC failed to appreciate the significance of the PC, which permitted Microsoft and other startups like Dell, Compaq and Gateway to thrive. J.A. 3646, 3671. For example, Ken Olson, the founder of DEC, is said to have remarked in 1977 that there was no reason for people to have computers in their homes. J.A. 3675.

Over the past 15 years, Microsoft has survived several inflection points that could have destroyed its operating system business. J.A. 3646-47, 3675. In the late 1980s, microprocessors became powerful enough to support graphical user interfaces. J.A. 3646-47. Had Microsoft not managed to enhance MS-DOS with Windows 3.0, competitors such as Apple and IBM could have captured the business. J.A. 3646-47, 3675. The transition in the early 1990s from "16-bit" to "32-bit" microprocessors was another inflection point. J.A. 3646-47, 3676. Had Microsoft not responded with two new 32-bit operating systems—Windows 95 and Windows NT—consumers might have chosen other operating systems. J.A. 3646-47, 3676-77.

The rise of the Internet presents another inflection point, which "could oust the PC operating system from its position as the primary platform for applications development and the main interface between users and their computers." 84 F. Supp. 2d at 26 (FF 60). In May 1995, Bill Gates described the challenge of "The Internet Tidal Wave":

> Perhaps you have already seen memos from me or others here about the importance of the Internet. I have gone through several stages of increasing my views of its importance. Now I assign the Internet the highest level of importance. In this memo I want to make clear that our focus on the Internet is critical to every part of our business. The Internet is the most important single development to come along since the IBM PC was introduced in 1981. It is even more important than the arrival of [the] graphical user interface (GUI).

J.A. 9872. Had Microsoft not added Internet technologies to its products, it would be an anachronism today, J.A. 3663-65, 3677-80, for "the Internet has become both a major inducement for consumers to buy PCs for the first time and a major occupier of the time and attention of current PC users," 84 F. Supp. 2d at 28 (FF 70). Indeed, many in 1995 believed that Microsoft had missed the boat on the Internet and was doomed as a result. J.A. 3678-79.

Even as Microsoft grapples with the Internet, it faces a new inflection point: the advent of "information appliances" (such as television set-top boxes, handheld devices and game consoles) and the transformation of software from shrink-wrapped products to Web-based services. J.A. 3647, J.A. 3680-81, 3742-45; J.A. 7805-08; J.A. 9395-96; J.A. 9647-48. Just as PCs rendered mainframes less important, this new breed of smaller, less expensive computing devices threatens to do the same to PCs. J.A. 3648, 3680-81, 3745-47. Customers who otherwise would use a PC "for storing addresses and schedules, for sending and receiving E-mail, for browsing the Web, and for playing video games might be able to choose a complementary set of information appliances over an Intel-compatible PC system without incurring substantial costs." 84 F. Supp. 2d at 15-16 (FF 23); *see also* J.A. 13517 ("[T]he biggest challenge to Microsoft's . . . operating system franchise is that there would be many computers that are not running Windows (that are simply Net devices) on which AOL could effectively be the operating system."). Microsoft thus has developed a new embedded operating system, called Windows CE, designed for use with information appliances, J.A. 3747, and it is now betting the company on a dramatic new initiative, called ".NET," intended to provide an infrastructure that will enable

thousands of firms to provide a wide range of compatible services to all types of information appliances, J.A. 2742.

3. The Software Business

Competition in developing and marketing software is intense. J.A. 3671; J.A. 4209-37. Even the district court acknowledged that the software business "is characterized by dynamic, vigorous competition." 84 F. Supp. 2d at 25 (FF 59). In addition to the destabilizing effects of constant technological change, the very nature of software makes the business intensely competitive. J.A. 3648-49, 3671. For example, software never wears out and is easily copied. J.A. 3648-49. Consequently, a company must compete not only against its competitors' products, but also against prior versions and illegal copies of its own products. J.A. 3648-49, 3686-87; *see also* 84 F. Supp. 2d at 25 (FF 57-58). Because existing software can be improved in myriad ways and microprocessor power continues to increase, opportunities for creating new and improved products are essentially infinite. J.A. 3681; J.A. 4216-17.

More fundamentally, unlike industries that require substantial investments in infra-structure or access to scarce natural resources, software is based entirely on ideas implemented as written instructions that can be created by literally millions of people. J.A. 3648, 3682-84; J.A. 4212-15. For example, a Finnish graduate student named Linus Torvalds created the Linux operating system and put his fledgling code on the Internet in October 1991, thereby enlisting help from other developers. J.A. 3721-22; *see also* 84 F. Supp. 2d at 23 (FF 50). Linux today consists of several million lines of code and is comparable in functionality and complexity to Microsoft's operating systems. J.A. 4259-61; J.A. 3721-22. Once created, software can be replicated and distributed pervasively at nominal cost. J.A. 3648, 3684-85; J.A. 4218-19; *see also* 84 F. Supp. 2d at 18 (FF 30).

4. Microsoft's Successful Business Model

At the outset of the PC era, Microsoft adopted a business model with four basic elements. J.A. 3649, 3688, 3689-91. First, Microsoft creates operating systems that provide a well-defined platform for developing and running applications despite differences in underlying PC hardware. J.A. 3689-90, 3703-06. Second, Microsoft's operating systems provide a consistent user interface that enables users to interact with their computers in a uniform way and thus to transfer their knowledge from one computer to another. J.A. 3690. Third, to promote their widespread use, Microsoft licenses its operating systems to OEMs at attractive prices, typically far less than 5% of the price of a new computer. J.A. 3649-50, 3690-91. Fourth, Microsoft works closely with OEMs, ISVs and users to ascertain their needs and to "evangelize" the features and functionality of Microsoft's platforms. J.A. 3691, 3692-98.

These four elements are directed at a common goal: creating a platform—Windows—that enables thousands of hardware and software vendors to build a wide range of compatible products. J.A. 3649-52, 3691, 3706-10. Such broad compatibility—which gives rise to a phenomenon known as "network effects"—provides substantial benefits. OEMs benefit because their PCs can run all of the many applications written for Windows and because users are familiar with the Windows user interface. J.A. 3649-50, 3706; J.A. 4003. ISVs benefit because their applications can make use of system services provided by Windows and because they can write applications once that will run on a broad range of PCs. J.A. 3649-50, 3707-08; J.A. 3525-28. Consumers benefit because they can choose from thousands of PC models and applications that work well with one another and because such compatibility fosters intense competition among OEMs and ISVs to deliver innovative products at attractive prices. J.A. 3649-50, 3708-10. The broad compatibility provided by Windows—which would be lost if OEMs were permitted to

install some parts of the operating system but not others—helped to propel widespread use of PCs in the workplace, schools and many homes. J.A. 3651-52, 3800.

Microsoft's "high volume/low price" business model stands in stark contrast to those of rivals like Apple and Sun, which develop and market complete computer systems that include both hardware and software. J.A. 3650-51, 3688-89. This "single vendor" approach makes it easier to ensure that all components of a computer work well together, J.A. 3688, but prices for Apple's and Sun's products are considerably higher than comparable offerings from OEMs and ISVs that build on Windows, J.A. 3650-51, 3709. In fact, the district court found that "the package of hardware and software comprising an Apple PC system is priced substantially higher than the average price of an Intel-compatible PC system." 84 F. Supp. 2d at 15 (FF 21).

B. The Decision To Support the Internet in Windows

The district court found that Microsoft's decision to include Internet technologies in Windows was motivated primarily by a desire to prevent Navigator from succeeding as a rival platform. 84 F. Supp. 2d at 49 (FF 155). In fact, although Microsoft came to regard Netscape as a platform competitor, Microsoft's decision to include Internet technologies in Windows *predated* Netscape's emergence as such. *See* J.A. 4298-99, 4301-02; J.A. 3360-70; J.A. 7585; J.A. 8054-56; J.A. 10865; J.A. 10870; J.A. 10874; J.A. 10883; J.A. 10894; J.A. 10979; J.A. 10995; J.A. 11004; J.A. 11152; J.A. 11818. Once Microsoft did recognize Navigator as a potential platform, Microsoft redoubled its efforts to provide top-notch Internet support in its platform, Windows, but those efforts were already underway. J.A. 7747.

Starting in 1993, Microsoft realized that users would want operating systems that provided Internet access. J.A. 3363, 3364-66; J.A. 8056-60; J.A. 10870; J.A. 10894. Microsoft also foresaw that ISVs would want to include Internet-related features in their products and thus

would look to Windows to provide system services that would enable such features. J.A. 4299-301; J.A. 3295; *see also* J.A. 9882; J.A. 11235-41. Microsoft thus decided in early 1994 to provide Internet support, including Web browsing software, in future operating systems. J.A. 3294-95, 3317, 3363, 3366-70, 3384; J.A. 7734-36; J.A. 8055-56.

Microsoft's decision to "include built-in access to the Internet" in Windows 95, code-named "Chicago," was publicly announced in April 1994—the month in which Netscape was incorporated and six months before Netscape released a beta test version of Navigator. J.A. 3361; J.A. 11038; J.A. 11039; J.A. 11042. By the time Netscape commercially released the first version of Navigator in December 1994, Microsoft had already completed much of the "plumbing" needed to provide Internet support in Windows 95. J.A. 3361; J.A. 8054.

Jim Clark, Netscape's co-founder, testified that *before* Netscape released its first beta test version of Navigator, "Bill Gates specifically told me he was going to give away the Web browser in the operating system." J.A. 12744-45. According to Clark, Gates stated at a September 1994 conference, "'I hope no one plans to make money on browsers because they will get bundled into the operating system.' And this was before Netscape released the beta." J.A. 12745.

Microsoft needed to add Web browsing software to Windows 95 to make the new operating system competitive with rival products such as IBM's OS/2, Apple's Mac OS and Sun's Solaris. J.A. 4300-01; J.A. 3371; J.A. 8066-67, 8075-76; J.A. 13056. Ben Slivka, who led the team creating IE (code-named "O'Hare"), testified that Web browsing software "was a necessary feature to make Windows competitive with other operating systems" and that "one of the key motivations for doing Internet Explorer was that IBM released OS/2 . . . and trumpeted very loudly that it had integrated web access." J.A. 13056, 13093. As Slivka explained, IBM's principal marketing message for OS/2 was "'Get on the Internet.'" J.A. 13093; *see also*

J.A. 10877. Thomas Reardon, another "O'Hare" developer, testified that "the critical date for me" was September 8, 1994, "the date that IBM announced that [OS/2] would include browsing technology. And from that date forward, it became my sole job . . . to think about browser technology in the [operating system]." J.A. 13289.

In a November 7, 1994 e-mail, Paul Maritz, then responsible for all of Microsoft's operating systems, stated that an "important objective[]" was to "[e]nsure that Windows is very well connected, in particular ensure it is straightforward for a user to get connected to the Internet, and ease-and-ubiquity of connection do not become differentiating attributes of Macintosh or OS/2." J.A. 10878. To remain competitive, Maritz noted, Windows 95 "will ship a standard initial-access and [World Wide Web] browsing package (code-named 'O'Hare')." J.A. 10878; *see also* J.A. 7738-41. A few days later, Maritz wrote that "'one button install' for Internet access is a must-have for the Windows platform, as soon as possible." J.A. 10881. Maritz continued:

> Today attaching to provide [Web] access to the Internet from a PC is too complicated for a consumer user to deal with. If IBM (or Apple) can establish OS/2 (or the Mac) as the easy-to-use way to get access to the Internet, it will create a powerful consumer imperative that we DO NOT WANT to see happen.

J.A. 10881; *see also* J.A. 7741-44.

Netscape was well aware from the outset that operating systems, including Windows 95, would include Web browsing software. In a January 16, 1995 private placement memorandum, Netscape stated:

> Microsoft Corporation is already licensing browser software from Spyglass and has announced its intentions to add functionality to the browser software and to bundle it with its Windows 95 operating system. The Company believes that the other primary PC operating system vendors, Apple Computer, Inc. and International Business Machines Corporation ("IBM"), will also eventually incorporate some Web browser functions into their operating systems as standard features. This may also be true of UNIX operating system vendors, such as Sun Microsystems, Inc., Hewlett-Packard Company, IBM, Digital, The Santa Cruz

> Operation, Inc. and SGI. If these companies incorporate Web browser functionality into their software products, they could subsequently offer this functionality at little or no additional costs to customers.

J.A. 10818; *see also* J.A. 4301; J.A. 7460-63; J.A. 7744-47. Indeed, Netscape urged Microsoft in late 1994 to include Netscape's Web browsing software in Windows 95. J.A. 10706; J.A. 11265.

The district court acknowledged that "consumers in 1995 were already demanding software that enabled them to use the Web with ease, and IBM had announced in September 1994 its plan to include browsing capability in OS/2 Warp at no extra charge. Microsoft had reason to believe that other operating-system vendors would do the same." 84 F. Supp. 2d at 45 (FF 140). The district court nevertheless found that "personnel developing Internet Explorer at Microsoft contemplated" including IE "in a bundle of software that would have been sold as an add-on, or 'frosting,' to Windows 95." *Id*. at 44 (FF 137). The district court further found that "as late as the fall of 1994, Microsoft was planning to include low-level Internet 'plumbing,' such as a TCP/IP stack, but not a browser, with Windows 95." *Id*. at 49 (FF 156).

To the contrary, Microsoft always intended to include IE "in all versions of Windows 95. The only issue was one of schedule." J.A. 13060; *see also* J.A. 13078, 13098. When Slivka assumed control of the O'Hare project in October 1994, it appeared that "Windows 95 was going to ship so soon there was no way we could get a Web browser done in time to be part of [it]." J.A. 13070. But "[a]fter a couple of months," Slivka realized that "Windows 95 was going to take longer than [others] hoped," thus making it possible "to get the browser done in time to release [it] with Windows 95." J.A. 13070-71. Maritz explained:

> we had a concern as to whether we would be able to get the Internet Explorer technology developed in time for the initial shipment of Windows 95. So, for a time there was some feeling that we would ship it later and make it available through a package to be called "Frosting."

J.A. 7735-36. Because the schedule for Windows 95 slipped—as often happens with software products—Microsoft was able to include IE in the version of Windows 95 supplied to OEMs in July 1995. J.A. 7736; *see also* 84 F. Supp. 2d at 49 (FF 158); J.A. 3370-71.

"Since the release of Internet Explorer 1.0 in July 1995, Microsoft has distributed every version of Windows with Internet Explorer included." 84 F. Supp. 2d at 58 (FF 202). IE was not included, however, in the initial retail version of Windows 95 released in August 1995 for two reasons: (i) the retail version had to be ready before the OEM version in order to get boxed copies into stores prior to the launch date, and (ii) there was concern that the Microsoft Network could not handle all of the requests for Internet signup if IE were included in the initial retail version. J.A. 3377-79; J.A. 7735-36; J.A. 8064-70. (The district court incorrectly stated that Microsoft allowed OEMs to ship Windows 95 without IE for a few months in 1997 when Microsoft provided OEMs with IE 4 on a separate disk. 84 F. Supp. 2d at 49 (FF 158). The release of Windows 95 shipped by OEMs for those few months included IE 3. *Id*. at 50 (FF 161).)

In response to consumer demand, all major operating system vendors, including IBM, Apple, SCO, Sun, Be, Novell and Caldera, provide Web browsing software with their operating systems. J.A. 4302-05; J.A. 3384-92; J.A. 7900-06; J.A. 8115-16; J.A. 10862; J.A. 10864; J.A. 11009; J.A. 11012; J.A. 11015; J.A. 11017; J.A. 11626; J.A. 11669; J.A. 11673; J.A. 11731; J.A. 11757; J.A. 11761; J.A. 12041; J.A. 12862-63, 12868-69; J.A. 12051, 12058; J.A. 12061. As IBM's John Soyring testified, IBM included Web browsing software in OS/2 as a "stimulant to sell additional OS/2 copies." J.A. 6192. Sun's James Gosling similarly testified, "I think that it is pretty clear that browsing functionality is a very valuable thing to have available to users in operating systems." J.A. 6874.

The district court found that although these other companies "bundle a browser with their operating system products," they allow OEMs and others "either to not install it or, if the browser has been pre-installed, to uninstall it." 84 F. Supp. 2d at 48 (FF 153). That is true only because those companies have not invested the resources to integrate Web browsing software as deeply into their products as Microsoft did and have put much less emphasis on having Web browsing software provide Internet-related system services to applications running on their operating systems. J.A. 3384-85, 3387, 3388-89. For example, Apple markets its Mac OS as offering "Internet integration" because people "want to buy computers to get on the Internet. And if you tell them it's integrated in, especially from a user experience, they like that." J.A. 5497-98. Despite this marketing message, Apple elected not to devote the engineering resources needed actually to integrate Web browsing software into the Mac OS. J.A. 5507-08. In contrast, Microsoft devoted hundreds of millions of dollars to provide users, ISVs and OEMs with true "Internet integration" in Windows. J.A. 3316-25.

C. Early Discussions Between Microsoft and Netscape

As part of its effort to build Internet support into its operating systems, Microsoft sought to license third-party Web browsing software that could be included in Windows 95 with appropriate modifications. J.A. 4027-28; J.A. 13315. One of the first companies Microsoft contacted was Netscape, which rebuffed Microsoft's initial overture in the fall of 1994. J.A. 4027-28. Microsoft then negotiated with Spyglass to license its "Mosaic" Web browsing software. J.A. 4029. Netscape later reversed its position and sought to persuade Microsoft to license Navigator. J.A. 4032-36; J.A. 11247. Microsoft told Netscape that it would pay only a flat-fee royalty (as opposed to a per-copy royalty) to license Navigator because Microsoft intended to include it in Windows 95. J.A. 4034-35; J.A. 13212-13; J.A. 13330. As Maritz explained, "we

were hoping to ship Windows 95 in very high volume. And if we had to pay a royalty on every copy, that could add up to [a] substantial amount of money over time." J.A. 7737.

In December 1994, Netscape's Jim Clark sent an e-mail to Brad Silverberg, who was responsible for developing Windows 95, urging Microsoft to license Navigator for inclusion in Windows 95. J.A. 10706; J.A. 12759-60. Stating that Netscape's business was not focused on "client" software (*i.e.*, desktop software), Clark told Silverberg:

> Microsoft is the de facto standard "client" software company and we have never planned to compete with you, so we have never considered a "client" as being our business. Our business is adding value on the back-end [*i.e.*, on servers] in the form of vertical applications . . . .
>
> We want to make this company a success, but not at Microsoft's expense. We'd like to work with you. Working together could be in your self interest as well as ours. Depending on the interest level, you might take an equity position in Netscape, with the ability to expand the position later.

J.A. 10706; *see also* J.A. 10763; J.A. 11265.

Although Microsoft did not take an equity stake in Netscape or license Navigator, the two companies continued to discuss potential collaboration. J.A. 4037-39, 4040-41; J.A. 13334-39. Microsoft told Netscape about its plans to include Internet technologies in Windows 95 and explained how Netscape could take advantage of the new system services that IE would provide. J.A. 4043, 4044-46. Microsoft also sent Netscape the Software Developers Kit for two sets of Internet-related APIs in Windows 95, and solicited Netscape's feedback. J.A. 4046; J.A. 8609-10; J.A. 11219; J.A. 13350-51.

On June 2, 1995, senior executives of the two companies, including Netscape's CEO, Jim Barksdale, met to explore areas of collaboration. J.A. 4049-50, 4055; J.A. 11249. At that meeting, Microsoft suggested that "the version of Navigator written for Windows 95 be designed to rely upon the Internet-related APIs in Windows 95 and distinguish itself with 'value-added' software components." 84 F. Supp. 2d at 31 (FF 81). Netscape expressed interest in "[a] close

relationship on future clients," J.A. 11269, and requested advance notice of Microsoft's plans for new versions of Windows, J.A. 4058.

Barksdale testified that the June 2, 1995 meeting was a "cordial, open discussion of issues and direction," and that "Microsoft's attitude was very friendly and nonthreatening." J.A. 5000; J.A. 5015; *see also* J.A. 10764; J.A. 10767; J.A. 11259; J.A. 11267; J.A. 11271. In an e-mail to Marc Andreessen, who co-founded Netscape with Clark, Barksdale wrote: "Mostly they want us to work with them to add value to their products and our products. It was a good session . . . they agreed to almost all the things you asked me to ask for." J.A. 10766 (ellipses in original); *see also* J.A. 10764. At the conclusion of the June 2 meeting, Barksdale suggested that representatives of the two companies reconvene for a "joint brainstorming session," which occurred on June 21, 1995. J.A. 4062; J.A. 11259; *see also* 84 F. Supp. 2d at 31 (FF 82).

Microsoft software engineers, not senior executives, attended the June 21, 1995 meeting because its agenda addressed technical rather than strategic issues. J.A. 4063-67; J.A.10771. At the outset of the meeting, Barksdale and other Netscape representatives asked about the "line" between Windows 95 and applications running on the operating system. J.A. 4070-71, 4071-73; J.A. 13231; J.A. 13393-95; *see* also 84 F. Supp. 2d at 32 (FF 85). After this preliminary discussion, Microsoft went through the issues the two companies had agreed to discuss, J.A. 4072-73, 4073-81, including Microsoft's proposal that it "treat Netscape as a 'preferred' partner" and that Netscape "select Microsoft solutions where they meet Netscape customers' needs," J.A. 11215. In its findings, the district court stated:

> The Microsoft representatives did not insist at the June 21 meeting that Netscape accept their proposal on the spot. For his part, Barksdale said only that he would like more information regarding where Microsoft proposed to place the line between its platform and Netscape's applications. In the ensuing, more technical discussions, the Netscape executives agreed to adopt one component of Microsoft's platform-level Internet technology called Internet Shortcuts. The

> meeting ended cordially, with both sides promising to keep the lines of communications open.

84 F. Supp. 2d at 32 (FF 86). The district court further found that it was Microsoft that ceased the "effort to reach a strategic concord" following the meeting. *Id*. at 33 (FF 87). In its conclusions of law, however, the district court asserted that Microsoft presented a "market allocation proposal" to Netscape at the June 21 meeting, 87 F. Supp. 2d at 45, a characterization of the companies' discussions not supported by the district court's own findings.

Microsoft routinely "evangelizes" new Windows system services to ISVs creating applications for Windows. J.A. 3691; J.A. 3318-19; J.A. 4087-89. Consistent with that goal, Microsoft encouraged Netscape to take advantage of Windows 95's Internet technologies in developing a version of Navigator for the operating system. J.A 4088-93. Even Barksdale admitted that Microsoft "didn't ask us to stop that moment from building our product, since we already announced it and had it in beta." J.A. 5245. In fact, the Windows 95 version of Navigator became the "killer app of 1995." J.A. 5246.

The district court found that following the June 21 meeting, Microsoft failed to respond in a timely manner to Netscape's requests that Microsoft (i) license Netscape a "scripting tool" that Netscape could use to make Navigator compatible with certain dial-up ISPs, and (ii) develop new APIs in Windows 95 that exposed Remote Network Access ("RNA") functionality (which provides one way to connect a computer to the Internet via a modem). 84 F. Supp. 2d at 33-34 (FF 90-92). The "scripting tool" Netscape requested ultimately shipped with the Windows 95 CD-ROM and with the Windows Resource Kit for ISVs. J.A. 4097. Microsoft also worked assiduously to make RNA functionality available to Netscape and other ISVs through APIs and, more generally, provided uniquely high levels of technical support to Netscape—even though Microsoft was struggling to complete Windows 95 by the scheduled launch date. J.A. 4094-106;

J.A. 11208; J.A. 11209; J.A. 11210; J.A. 11244; J.A. 11246; J.A. 11248; J.A. 11250; J.A. 11251; J.A. 11253; J.A. 11254; J.A. 11255; J.A. 11257; J.A. 11262; J.A. 11263; J.A. 11600; J.A. 11601; J.A. 13408-09. Despite the district court's finding that Microsoft withheld "crucial" technology from Netscape, 84 F. Supp. 2d at 33-34 (FF 90-92), Netscape released a version of Navigator for Windows 95 "roughly concurrently" with the release of the new operating system J.A. 12950 at 45; *see also* J.A. 11589.

D. Microsoft's Vigorous Competition with Netscape

"As soon as Netscape released Navigator on December 15, 1994, the product began to enjoy dramatic acceptance by the public . . . ." 84 F. Supp. 2d at 29 (FF 72). By the time Microsoft released Windows 95, "Navigator already enjoyed a very large installed base and had become nearly synonymous with the Web in the public's consciousness." *Id*. at 46 (FF 143). As a new entrant challenging an established competitor, Microsoft garnered increased usage share for IE over time by (i) steadily improving IE, (ii) encouraging third parties to use IE, and (iii) developing new versions of Windows into which IE was more deeply integrated. These actions "contributed to improving the quality of Web browsing software, lowering its cost, and increasing its availability, thereby benefiting consumers." *Id*. at 111 (FF 408); *see also* J.A. 4322-56; J.A. 11794, 11796.

1. Developing Improved Versions of IE

Following the release of Windows 95, Microsoft introduced IE 2 in November 1995 as part of OEM Service Release ("OSR") 1.0 of Windows 95. J.A. 3483-84. (An OSR is an interim release of Windows made available to OEMs to provide them with the latest improvements to the operating system.) The first two versions of IE were generally viewed as inferior to Navigator. J.A. 4137-38; J.A. 3407. Consequently, although IE 1 and IE 2 were part of Windows

95 as distributed to OEMs, Navigator enjoyed substantially higher usage share. J.A. 3407; J.A. 3483-84. The district court found that in January 1996, Navigator's usage share exceeded 80%, while IE's usage share was approximately 5%. 84 F. Supp. 2d at 98-99 (FF 360). As Microsoft improved IE, however, IE's usage share increased. J.A. 4339-40; J.A. 11794-96. To enable existing Windows users to upgrade their copy of the operating system, Microsoft separately distributed later versions of IE to consumers through various channels. *See* J.A. 8038-40; J.A. 10724; J.A. 11692.

IE 3. On August 13, 1996, Microsoft introduced IE 3 as part of OSR 2.0 of Windows 95. J.A. 3483-84. IE 3 represented a vast improvement over IE 2. J.A. 3466; *see also* 84 F. Supp. 2d at 44 (FF 135). For instance, IE 3 supported ActiveX controls that enabled Web designers to build more appealing Web sites. J.A. 3466-68. Microsoft also dramatically improved the Internet Explorer Administration Kit ("IEAK"), which enabled ISPs and corporate customers to customize IE. J.A. 3469. As a result of these improvements, many reviewers found IE 3 equal or superior to Navigator 3. J.A. 3469-75; J.A. 4666-67; J.A. 11795; J.A. 11920; J.A. 11923; J.A. 11925; J.A. 11928; J.A. 11930; J.A. 11956; J.A. 11959; J.A. 11964; J.A. 11966; J.A. 11967; J.A. 11974; J.A. 11979; J.A. 11981; J.A. 11986; J.A. 12001.

From the standpoint of ISVs, IE 3's "componentized" or "modular" architecture made Windows a more attractive platform. J.A. 3469, 3485. ISVs were increasingly designing their applications to access information on the Internet. J.A. 3333; J.A. 3485. ISVs also were using Internet technologies like HTML (a display format used to create Web pages) to display information even when users were not connected to the Internet. J.A. 3333. To facilitate development of such "Internet-enabled" applications, Microsoft built IE 3 as a set of operating system components whose system services could be separately invoked by applications running

on Windows. J.A. 3333-34; J.A. 3435, 3436. In contrast, Navigator remained a monolithic block of software code that did not make system services like HTML display available separately to other applications. J.A. 3319; J.A. 3455.

Due to its componentized design, one IE component (URLMON.DLL) locates information on the Internet using Internet addresses or "URLs" (*e.g.*, http://www.microsoft.com); another component (MSHTML.DLL) "parses" and "renders" information created using HTML; another component (WININET.DLL) downloads information from the Internet using HTTP and other networking protocols; and yet another component (SHDOCVW.DLL) provides user interface elements like "Back" and "Forward" buttons. J.A. 3323-24; J.A. 3435. Just as ISVs use other system services provided by Windows, ISVs can rely on these components to provide system services like reading URLs and displaying HTML without invoking other IE components. J.A. 3333-34; J.A. 3436. Applications like Intuit's Quicken finance software can thus seamlessly invoke IE components in Windows to update the value of a user's portfolio without launching a separate Web browser application. J.A. 3335, 3383-84.

IE 4. On October 1, 1997, Microsoft introduced IE 4, which became part of OSR 2.5 of Windows 95. J.A. 3483-84. IE 4 represented another technological leap forward, and fared even better in comparative reviews with Navigator. J.A. 3475, 3480-83; *see also* J.A. 4666-67; J.A. 10742; J.A. 10745; J.A. 10747; J.A. 10749; J.A. 10751; J.A. 10754; J.A. 10756; J.A. 10758; J.A. 12009; J.A. 12011; J.A. 12013; J.A. 12067; J.A. 12081; J.A. 12110; J.A. 12119; J.A. 12137. For instance, IE 4 included support for Dynamic HTML, which allows Web designers to change the color, size or style of text on a Web page without waiting for the entire screen to refresh. J.A. 3475-76.

IE 4 also provided other important enhancements to Windows 95, replacing core operating system files. J.A. 3476; J.A. 7957-59. In fact, even Netscape described IE 4 as "really an [operating system] upgrade." J.A. 11692. The most important of these enhancements was a "Web-like" user interface for Windows 95, which Microsoft thought would make the operating system easier to use. *See* J.A. 3373, 3375-77, 3379-80, 3381-84; J.A. 10896; J.A. 10897; J.A. 10904; J.A. 10924; J.A. 10926; J.A. 10942; J.A. 10973; J.A. 11019; J.A.11143. This "Web-like" user interface employed the same navigational paradigm popularized by the Web—including "Back" and "Forward" buttons—to locate information in diverse storage devices such as a floppy disk, CD-ROM drive or local area network. J.A. 3326-27, 3373; J.A. 3476; J.A. 8117; J.A. 11019.

2. Encouraging Third Parties To Use and Distribute IE

With the release of IE 3, Microsoft sought to convince third parties such as ISPs, OLSs, ISVs and ICPs to use and distribute IE. Microsoft faced an uphill battle in this effort because Navigator had become nearly "synonymous with the Web." 84 F. Supp. 2d at 46 (FF 143).

ISPs. ISPs such as EarthLink and Netcom provide computer users with a connection to the Internet, J.A. 3886, 3893, but unlike OLSs such as AOL, they generally do not provide subscribers with proprietary content, J.A. 3208; J.A. 4423; J.A. 3432-33. As of 1999, there were more than 4,500 ISPs in North America. J.A. 3889, 3893, 3895.

By 1995, Netscape had formed relationships with almost all of the major ISPs, and many ISPs featured Navigator exclusively. J.A. 3896. In fact, in early 1996, no major ISP in the United States distributed IE, and few even supported IE on their service. J.A. 3898-99. Microsoft had difficulty persuading ISPs to distribute IE because of their existing agreements with Netscape. J.A. 4424-25; J.A. 3899-3900.

In August 1996, Microsoft introduced the Internet Connection Wizard ("ICW") and Windows referral server as part of OSR 2.0 of Windows 95. J.A. 4425; J.A. 3906; *see also* 84 F. Supp. 2d at 72 (FF 253). The ICW takes Windows users step-by-step through the process of connecting to the Internet. J.A. 3906-07. If a Windows user elects to use the ICW, his or her computer automatically dials into the Windows referral server, a computer maintained by Microsoft that provides information about participating ISPs. J.A. 4426; J.A. 3906-07. The Windows user then can sign up for Internet access with any listed ISP. J.A. 3906-07. The ICW and Windows referral server not only helped Microsoft establish relationships with a number of leading ISPs; they also made it easier for Windows users to connect to the Internet. J.A. 3905, 3907; J.A. 4426; J.A. 8318-19.

Between July 1996 and September 1997, Microsoft entered into agreements with 14 ISPs to appear in the Windows 95 referral server, J.A. 4425; J.A. 3909-10, four of which ultimately elected not to participate, leaving only ten ISPs in the referral server, J.A. 3887-88, 3910, 3920; *see also* 84 F. Supp. 2d at 72-73 (FF 256). Generally speaking, Microsoft agreed to promote the ISPs' services by including them in the Windows 95 referral server; in exchange, the ISPs agreed to (i) promote and distribute IE in specified ways and (ii) pay a "referral" fee for subscribers obtained through the Windows 95 referral server. J.A. 4424, 4425; J.A. 3889-90, 3910-11; *see also* J.A. 11273; J.A. 11306; J.A. 11334; J.A. 12190; J.A. 12230; J.A. 12288; J.A. 12326; J.A. 12354; J.A. 12383; J.A. 12417. "Microsoft's Windows 95 Referral Server agreements were of relatively short duration," 84 F. Supp. 2d at 75 (FF 267), typically two years or less with both parties having a right of early termination, J.A. 3911-12.

Microsoft's agreements did not require ISPs to distribute IE exclusively. J.A. 4426-27; J.A. 3911-12. ISPs were expressly permitted to provide their subscribers with whatever Web

browsing software they requested. J.A. 3912. As a result, all of the participating ISPs distributed Navigator to some of their subscribers during the term of their agreements, J.A. 3889-90, 3893; J.A. 8322, and six of the ten ISPs included in the Windows 95 referral server also appeared in Netscape's referral server, J.A. 3887-88, 3889-90, 3918, 3919, 3920. In fact, several of the ISPs collectively distributed millions of copies of Navigator while they were included in the Windows 95 referral server. J.A. 3887-88, 3890-91, 3915-19; J.A. 12442; J.A. 12460; J.A. 16975. Although Microsoft had the right to remove those ISPs from the Windows 95 referral server because their distribution of IE fell below certain levels (typically 75% of their total Web browsing software distribution), J.A. 3887-88, 3912-13, Microsoft never exercised that right, 84 F. Supp. 2d at 75 (FF 264).

The ICW did not generate as many new ISP subscriptions as either Microsoft or the ISPs anticipated. *Id.* at 76 (FF 270); *see also* J.A. 3922. In April 1998, Microsoft unilaterally waived the provisions of its Windows 95 referral server agreements relating to distribution of IE. J.A. 4427-28; J.A. 3888, 3891-92, 3926; J.A. 10853; J.A. 10855; J.A. 10857; J.A. 10859; J.A. 11618. "By the end of September 1998, all of the Windows 95 Referral Server agreements had expired by their own terms." 84 F. Supp. 2d at 76 (FF 269); *see also* J.A. 3928; J.A. 8335.

The district court's failure to distinguish procompetitive from anticompetitive conduct is exemplified by its discussion of the impact of Microsoft's IEAK on small ISPs. *See* 84 F. Supp. 2d at 71-72 (FF 248-52); J.A. 3901-05. Using the IEAK, which could be downloaded free from Microsoft's Web site beginning in September 1996, small ISPs were able to customize IE for their service. J.A. 3887, 3901-02. Netscape largely ignored small ISPs and did not have a similar kit until June 1997, when it released "Mission Control" for $1,995 per copy. J.A. 3903. Although Microsoft's IEAK was a tremendous benefit to small ISPs, the district court cast Microsoft's

unquestionably procompetitive efforts in sinister terms, claiming that Microsoft had "beguiled many small ISPs that otherwise would not have done so into distributing Internet Explorer to their subscribers." 84 F. Supp. 2d at 72 (FF 252).

AOL and Other OLSs. In 1996, Microsoft entered into short term agreements with four OLSs to appear in a generic "online services" folder on the Windows desktop. J.A. 4423-24; J.A. 3457, 3465-66. Although the particulars varied, Microsoft agreed to license IE technology to the OLSs and promote their services by including them in the OLS folder; in exchange, the OLSs agreed to distribute and promote IE. J.A. 4423-24; J.A. 3455-56, 3465; J.A. 16581; J.A. 11048; J.A. 11095; J.A. 11117. The OLSs nevertheless were free, subject to certain limitations, to provide non-Microsoft Web browsing software to subscribers who requested it, and they had no obligation to prevent their subscribers from using non-Microsoft Web browsing software. J.A. 3455-57, 3465. The OLSs also were entitled to technical assistance from Microsoft at no charge and to modify elements of the IE source code to customize IE for use in their proprietary client software. J.A. 4423-24; J.A. 3453-55, 3465.

Of the four OLSs, AOL was by far the most significant because of its large subscriber base. 84 F. Supp. 2d at 77, 86 (FF 272, 306). In late 1995, AOL decided to license Web browsing software from either Netscape or Microsoft to integrate into AOL's proprietary client software used to access AOL's online service. J.A. 2989-90; J.A. 4410, 4422-23; J.A. 3434, 3436. Microsoft saw AOL, with five million subscribers at the time, as an important way to promote IE 3. J.A. 3436; *see also* 84 F. Supp. 2d at 77 (FF 274).

At the outset, AOL demanded some promotion of its service on the Windows desktop as part of any deal with Microsoft. J.A. 2990-93; J.A. 3438-39. Although Microsoft initially resisted, it eventually acquiesced because it discovered that AOL was already present on the

Windows desktop of many PCs by virtue of AOL's agreements with OEMs. J.A. 3438-39, 3443-44; J.A. 11141; J.A. 11639; J.A. 11642 *see also* 84 F. Supp. 2d at 78 (FF 279) ("AOL already enjoyed distribution agreements with major OEMs that placed an AOL icon on the desktop of millions of new PC systems."). Rather than place an AOL icon directly on the desktop, Microsoft agreed to include AOL in the OLS folder. J.A. 2994; J.A. 3443-44; J.A. 11686.

For its part, AOL had always intended "to select one firm's Web browsing software and then to work closely with that firm to incorporate its browsing technology seamlessly into the AOL flagship client software." 84 F. Supp. 2d at 82 (FF 293). A significant—if not the most significant—factor in AOL's decision to license IE was IE 3's componentized design, which enabled AOL to hide IE beneath AOL's branding. *Id*. at 79 (FF 281-82); J.A. 3440; J.A. 12062 (Video). As AOL's David Colburn admitted, "componentization was important to AOL" because "AOL wanted a browser that would connect seamlessly to the AOL software consistent with AOL's desire to provide an AOL 'feel' to its members during their online experience even if they were using the browser to access the Internet." J.A. 2998-99; *see also* J.A. 4407-08, 4411; J.A. 3440, 3441. Although initially skeptical about IE, after learning of IE 3's componentized design, AOL acknowledged that IE was technically superior to Navigator for AOL's purposes. J.A. 3442; *see also* J.A. 11046; J.A. 11652; J.A. 11656; J.A. 11902; J.A. 11911; J.A. 11914. Following a January 1996 meeting with Microsoft, AOL's Chairman Steve Case told a number of AOL executives: "From a pure technology standpoint, it does look like Microsoft may win this one." J.A. 11584; *see also* 84 F. Supp. 2d at 79 (FF 282).

AOL also found Netscape more difficult to deal with than Microsoft. J.A. 3447, 3449-50; J.A. 4411-12, 4413, 4414; J.A. 11650; J.A. 11658 Bill Hawkins of AOL described Netscape's technical team as a bunch of arrogant "rock stars" and complained that Netscape kept changing

the terms on which it would do business with AOL; *see also*. J.A. 3449-50; J.A. 10635-37. Steve Case later wrote in an internal AOL e-mail: "Netscape is breathing its own fumes and needs a wake up call. They need some gravity to bring them back to earth." J.A. 11646. In an e-mail sent to Case and others one month after AOL selected IE over Navigator, J.A. 11044-45, AOL's Colburn echoed that sentiment:

> NS believed that they were going to be the primary browser for AOL—which blows my mind after: (i) NS took off the table the board seat, AOL as the primary content provider, most of the advertising deal, etc.; and (ii) we mutually removed any primary commitments in this regard from the contract. (Why would we ever do a primary deal with NS based on what we were getting?)

Although AOL agreed to base its proprietary client software on IE, "AOL retained the right to distribute non-Microsoft Web browsing software to subscribers who affirmatively requested it" (so long as its shipments of such software did not exceed 15% of total shipments). 84 F. Supp. 2d at 81 (FF 289); *see also* J.A. 3455-57. There is no finding that AOL's commitment to use IE ever prevented AOL from complying with a subscriber's request for Navigator. "AOL also retained the right to provide a link within its service through which its subscribers could reach a Web site from which they could download a version of Navigator customized for the AOL service." 84 F. Supp. 2d at 81 (FF 289); *see also* J.A. 3455-56, 3461; J.A. 4419; J.A. 8372-74; J.A. 10852; J.A. 11667; J.A. 11668; J.A. 12062 (Video).

"Even if an AOL subscriber obtains the new client software that includes Internet Explorer, he can still browse the Web using . . . Navigator," 84 F. Supp. 2d at 83 (FF 297), which many AOL subscribers do, J.A. 3456. In addition, "AOL had the right under its agreement with Microsoft to terminate the distribution and promotion provisions relating to Internet Explorer on December 31, 1998," 84 F. Supp. 2d at 84 (FF 300), and even before it bought Netscape, AOL continued to work with Netscape notwithstanding its agreement with Microsoft, J.A. 3461-64; J.A. 4419-21.

Intuit and Other ISVs. "Since 1995, more and more ISVs have . . . enhanced the features of their applications by designing them to take advantage of the type of content and functionality accessible through browsing software." 84 F. Supp. 2d at 93 (FF 337). Like AOL, these ISVs have found Windows to be an attractive platform for Internet-enabled applications. J.A. 4445-47; J.A. 3525, 3529-36; J.A. 3334; J.A. 11764. For example, Intuit chose IE over Navigator largely because of IE's componentized design. J.A. 10774; J.A. 10777; J.A. 10782.

In 1995, Intuit included Navigator with both its Quicken and Turbo Tax products. J.A. 4445; J.A. 7044. Beginning in 1996, however, Intuit sought to build Internet support more deeply into Quicken. J.A. 7045-46. In particular, Intuit wanted users to be able to update the prices of securities in their portfolio and to display information in HTML without having to leave the Quicken user interface and launch a separate Web browser. J.A. 3077-78; J.A. 4445; J.A. 3335; J.A. 3990; J.A. 7045, 7062. IE 3's componentized design offered Intuit that ability; Navigator, which was a monolithic Web browser application, did not. J.A. 4445; J.A. 3989-92; J.A. 7045.

When Intuit asked for componentized Web browsing software, Netscape's initial reaction was that Quicken should run inside a Navigator window, not the other way around. J.A. 7046-47; J.A. 11595. Despite Intuit's repeated requests, Netscape failed to componentize Navigator. J.A. 11007. In March 1997, Intuit presented Netscape with a series of "drop-dead requirements," the first of which was that Navigator "[m]ust launch silently and seemlessly [sic] so that the customer does not see a running copy of [Navigator]." J.A. 10782.

Because IE satisfied Intuit's "drop-dead requirements" and Navigator did not, J.A. 7067-68; J.A. 10782, Intuit's technical team recommended IE. J.A. 3078-79; J.A. 7069, 7071-72, 7075; J.A. 7178-79. In announcing its choice of IE, Intuit stated: "The integration of Microsoft

Internet Explorer into our products provides the millions of Intuit customers with seamless access to all the Internet has to offer." J.A. 11598. Netscape's postmortem of the "Intuit Situation" candidly stated: "Embeddable browser: we don't have one. Showed prototypes, not real products." J.A. 10779; *see also* J.A. 10774; J.A. 10777.

The district court also found that Microsoft entered into dozens of "First Wave" agreements in which it agreed to give ISVs certain support in exchange for their agreement, *inter alia*, to "use Internet Explorer as the default browsing software for any software they develop with a hypertext-based user interface." 84 F. Supp. 2d at 93 (FF 339); *see also id*. at 93-94 (FF 337-40). There is no finding that those agreements resulted in wider distribution of IE or that they had any adverse impact on the distribution of Navigator by ISVs. Nor is there any finding that Microsoft ever refused to provide technical support to ISVs because they did not enter into a "First Wave" agreement or because they used Navigator instead of, or in addition to, IE.

ICPs. Microsoft introduced the Channel Bar (J.A. 11822) on the Windows desktop as part of IE 4. J.A. 3955; J.A. 3458-59. Using so-called "push" technology, the Channel Bar allowed users automatically to download information from specified Web sites at preset times. J.A. 3955. Once downloaded, the information could be viewed whenever the user wanted, even when the user was not connected to the Internet. J.A. 3956. To promote the Channel Bar, Microsoft sought to encourage ICPs such as Disney and CBS SportsLine to utilize Microsoft's push technology on their Web sites. J.A. 3962-63. Netscape later unveiled comparable forms of "push" technology, called Netcaster and InBox Direct. J.A. 3955, 3965; J.A. 4438-39; *see also* J.A. 11622; J.A. 11824.

To convince leading ICPs to develop content that would work with its forthcoming Channel Bar, Microsoft entered into agreements with 24 ICPs to appear on the Channel Bar.

J.A. 3946, 3962-63; J.A. 4438; J.A. 11360; J.A. 11382; J.A. 11401; J.A. 11422; J.A. 11444; J.A. 11465; J.A. 11486; J.A. 11507; J.A. 11530; J.A. 11552; J.A. 9973; J.A. 10022; J.A. 10047; J.A. 10075; J.A. 10096; J.A. 10128; J.A. 10152; J.A. 10181; J.A. 10233; J.A. 10256; J.A. 10278; J.A. 10644. These agreements were short term, generally lasting only about 12 to 18 months. J.A. 3947, 3998. In exchange for receiving a link to their Web site on the Channel Bar, J.A. 11822; J.A. 11833, the 24 ICPs agreed to distribute and promote IE in specified ways, J.A. 3969, 3970; *see* J.A. 11447; J.A. 10026. The ICPs also agreed to showcase certain IE 4 technologies such as Dynamic HTML on their Web sites. J.A. 3976, 3977. The agreements, however, did not prevent the 24 ICPs from also participating in Netscape's InBox Direct and Netcaster programs. J.A. 3958, 3965, 3972.

Microsoft's ICP agreements were not competitively significant. J.A. 4439-45. First, they covered only 31 of the more than 5,000 commercially significant Web sites that existed in 1999, and the 24 ICPs that entered into the agreements accounted for only five of the top 25 most frequently visited Web sites at the time. J.A. 3946, 3971-72, 3998; *see also* J.A. 3964; J.A. 11622; J.A. 11623; J.A. 11823; J.A. 11838; J.A. 11839. Second, only six of the 24 ICPs distributed any Web browsing software at all during the term of their agreements. 84 F. Supp. 2d at 89 (FF 320). Third, only one ICP developed any content using Dynamic HTML pursuant to its agreement. *Id*. at 93 (FF 336). Fourth, "consumers showed little interest in the Channel Bar." *Id*. at 91-92 (FF 331). The district court thus correctly found that Microsoft's ICP agreements did not have a substantial impact on Navigator's usage share. *Id*. at 92 (FF 332).

In April 1998, Microsoft unilaterally waived the distribution and promotion requirements of its ICP agreements. J.A. 3970, 3974, 3976, 3985. The challenged provisions of the agreements thus were in effect for only about six months, J.A. 8217, and Microsoft did not seek to renew any

of the agreements when they expired in the fall of 1998, J.A. 3947, 3967-68, 3985; *see also* 84 F. Supp. 2d at 91-92 (FF 331). Yet the district court found Microsoft liable under Section 2 based in part on the ICP agreements. 87 F. Supp. 2d at 42-43.

3. Integrating IE More Deeply into Windows

On June 15, 1998, Microsoft released Windows 98, the successor to Windows 95. 84 F. Supp. 2d at 13 (FF 8). As one of plaintiffs' technical experts, Glenn Weadock, conceded, IE is even more deeply integrated into Windows 98 than it was into Windows 95. J.A. 5894. This integration provides an array of benefits to users, ISVs and OEMs (described below) that cannot be duplicated by combining an operating system with a standalone Web browser like Navigator. J.A. 3325-39 & 3412-20; J.A. 3607. Even Weadock admitted that "the integration of Internet Explorer and Windows 98 may present benefits for certain users." J.A. 6042; *see also* J.A. 5933; J.A. 6052. Scott Vesey of Boeing, another of plaintiffs' witnesses, similarly testified that "[t]here are some benefits to that integration capability." J.A. 13136. None of these improvements, however, rendered Navigator incompatible with Windows. Netscape's Barksdale instead admitted that Navigator remains "perfectly interoperable" with Microsoft's operating system. J.A. 5061-62.

A number of important new features of Windows 98 depend on IE. J.A. 3325. Those features would not function if IE were removed from the operating system, and installing Navigator would not restore the lost functionality. J.A. 3325, 3326, 3329, 3330, 3331, 3339-42. As Jim Allchin, who oversaw the development of Windows 98, explained, the very same software code in Windows 98 that provides Web browsing functionality also performs core operating system functions by providing "(i) platform support to developers, (ii) user interface soft-

ware (for Windows itself and other software products) and (iii) access to information stored in locations other than the Internet." J.A. 3291-92; *see also* J.A. 5891.

Internet Support for ISVs. As noted above, Microsoft rewrote its Web browsing software prior to the release of OSR 2.0 of Windows 95 to create a series of components that provide a range of Internet-related system services to ISVs exposed through hundreds of APIs. J.A. 3334. The inclusion of these IE components in Windows provides benefits to a wide variety of ISVs. J.A. 4306-13; J.A. 3333-34. For instance, because Microsoft has included an HTML rendering engine in Windows (MSHTML.DLL), ISVs need not incur the expense of creating their own mechanism to display HTML, thus enabling them to focus their energies on adding innovative features to their products. J.A. 3333-34.

At least 100 ISVs, including other developers of Web browsing software, have created applications that rely on system services provided by the IE components of Windows. J.A. 3334; J.A. 3529-31; J.A. 11764; J.A. 12028. In fact, Web browser "shells" such as Surf Monkey, NeoPlanet and Encompass use virtually all of the system services provided by IE, and even Navigator uses some of those services. J.A. 3335-3336; J.A. 12061. Although Microsoft sometimes permits ISVs to distribute IE components with their applications to update users' operating systems to the necessary level of functionality, there are many difficulties with that approach. J.A. 3336-37; J.A. 3531, 3536; J.A. 9418-19. In addition, many ISVs do not distribute IE components with their applications, and those applications would not function properly or at all if IE were not present in Windows 98. J.A. 3531, 3536.

Windows 98 User Interface. The Windows 98 user interface is generated by the same software code that enables users to "browse" the Web because both Web pages and the Windows 98 user interface are displayed using HTML. J.A. 3325-27 & J.A. 3412-20. Thus, if IE were not

present in the operating system, the Windows 98 user interface would not work. J.A. 3326. As Allchin explained, "It would be highly inefficient and bad software engineering practice to have two HTML parsing and rendering engines in the same operating system, one for HTML content from the Internet and another for all other HTML content." J.A. 3325-26. Plaintiffs' expert, Weadock, agreed that eliminating redundant software code and reducing the amount of such code that must be loaded into memory can be beneficial to users. J.A. 5891-92.

A feature of the Windows 98 user interface that depends on IE is "Windows Explorer." J.A. 3326-27 & J.A. 3412-20. Windows Explorer enables users to move seamlessly in the same browsing window between files stored on their hard drive, on an external disk drive, on a local or wide area network or on the Internet using the navigational paradigm of the Web (*e.g.*, "Back" and "Forward" buttons, "Favorite" information sources and a "History" of recently-accessed information). J.A. 3326-27; *see also* J.A. 11799; J.A. 12061 (Video). Once again, Weadock agreed that some users benefit from the ability to view locally-stored information in the same browsing window in which they view Web sites. J.A. 5899-901; *see also* J.A. 13136-37, 13143-44. Another feature of the Windows 98 user interface that depends on IE is "WebView." J.A. 3327. WebView provides users with a richer view of locally-stored information, enabling them, for example, to see a "thumbnail" preview of the first page of a slide presentation by highlighting the appropriate file. J.A. 3327; J.A. 12061 (Video). Weadock admitted that WebView "could be a useful feature for some people." J.A. 5920-21. Neither Windows Explorer nor WebView would function if IE were not present in Windows 98. J.A. 3326, 3327.

Windows 98 Help System. Like other modern operating systems, Windows 98 includes a "Help" system that provides users with answers to frequently-asked questions. J.A. 3328; J.A. 12061 (Video); J.A. 12065. This new Help system is displayed in HTML and thus depends

on IE components such as MSHTML.DLL. J.A. 3328; J.A. 5903. Microsoft also designed its new Help system to provide system services that ISVs can use to offer HTML-based Help in their own products. J.A. 3328. The benefits of the Windows 98 Help system include: (i) easier authoring of Help topics using a wider variety of tools, (ii) richer display of Help topics with more appealing graphics, and (iii) use of Web navigational paradigm such as "Back" and "Forward" buttons to locate Help topics. J.A. 3328. IE components also allow users to move seamlessly from the Windows 98 Help system to a Microsoft Web site containing additional information about various Help topics. J.A. 3328. Weadock agreed that the Windows 98 Help system "provides certain benefits." J.A. 5904; *see also* J.A. 13136. He also acknowledged that Microsoft designed its new Help system on the assumption that IE would be present in the operating system. J.A. 5906-08. Thus, if IE were removed from Windows 98, the operating system would contain no Help functionality. J.A 3329.

Windows Update. To enable users to obtain the latest enhancements to Windows 98, Microsoft developed "Windows Update." J.A. 3329. Windows Update automatically detects what new enhancements are not installed on a user's computer and allows the user to download them from a Microsoft Web site. J.A. 3330; J.A. 5934; J.A. 10513-14. Edward Felten, another of plaintiffs' experts, agreed that "there are ways in which a customer might benefit from a Windows Update feature." J.A. 6931. Windows Update would not function if IE were removed from Windows 98. J.A. 3330.

E. Plaintiffs' Flawed Lawsuit

Plaintiffs' central contention was that Microsoft's alleged tie of IE to Windows and its agreements with third parties to promote and distribute IE foreclosed Netscape from distributing Navigator. Three facts undercut this claim. First, Netscape has distributed vast quantities of

Navigator through many distribution channels. 87 F. Supp. 2d at 53. Second, this Court's June 1998 decision in the Consent Decree Case articulated a standard for tying that plaintiffs cannot hope to meet. *See* 147 F.3d at 950. Third, AOL acquired Netscape for $10 billion in stock at the time the deal closed, 84 F. Supp. 2d at 83 (FF 299), thus making evident the value of Netscape's business and continuing its competition with Microsoft.

1. Netscape's Distribution of Vast Quantities of Navigator

Software in general and Web browsing software in particular are easy and cheap to distribute. J.A. 4370-73; J.A. 3493, 3495-3502; J.A. 11808-11. Since its inception, Netscape has distributed Navigator through a variety of channels. J.A. 4387-89; J.A. 3502-03; J.A 11802-04; J.A. 11900; J.A. 12162. Indeed, Netscape has repeatedly stated that Navigator is "ubiquitous." J.A. 4866. Netscape's co-founder Andreessen explained:

> [U]biquitous means it tends to be widely available. It tends to be everywhere in a sense. It's not, of course, literally everywhere, but it is ubiquitous in the sense that it's relatively common to walk up to a PC and for there to be a Netscape client on it, or it's very easy to obtain that by downloading it for free.

J.A. 12681-82. Barksdale referred to Navigator as "the most prolific computer application ever sold," J.A. 12156, stating that Netscape had distributed more copies of Navigator "than any computer application in history," including Microsoft Word and Excel, J.A. 12139.

By its own account, Netscape has been extremely successful in distributing Navigator over the Internet. J.A. 4850; J.A. 4866-67; J.A. 10708; J.A. 10710; J.A. 10712; J.A. 10727; J.A. 12139; J.A. 12149; J.A. 12156. There are tens of thousands of "Download Navigator" and "Netscape Now" buttons on the Web from which Navigator can be downloaded. J.A. 3946-47, 3971; J.A. 3496-97; J.A. 4844-45; J.A. 11725. As Barksdale admitted, anyone with a modem and an Internet connection can download Navigator in about 30 minutes. J.A. 4856-57. Although the district court downplayed the significance of the Internet as a means of distribution, 84 F. Supp.

2d at 47, 98 (FF 146, 357), Netscape's Clark testified that the Internet is "an unparalleled distribution channel" and that "the Internet is the lowest cost distribution system for software in the world," calling it the "[b]est I know." J.A. 12749-50. Plaintiffs do not claim that Microsoft did anything to exclude Navigator from distribution over the Internet.

Netscape also has successfully distributed Navigator through the OEM channel. J.A. 3500. "Microsoft's license agreements have never prohibited OEMs from pre-installing programs, including Navigator, on their PCs and placing icons and entries for those programs on the Windows desktop and in the 'Start' menu." 84 F. Supp. at 63 (FF 217); *e.g.*, J.A. 11684; J.A. 11685. (The "Start" menu is the primary means by which Windows users access other software installed on a PC.) As of 1999, many leading OEMs, including Acer, Compaq, Fujitsu, Gateway, Hewlett-Packard, Hitachi, IBM, Packard Bell/NEC and Sony preinstalled Navigator on some of their PCs. J.A. 3613-14; J.A. 8548-49; J.A. 12063; J.A. 12063 (Video). Although the district court found that "Microsoft has largely succeeded in exiling Navigator from the crucial OEM distribution channel," 84 F. Supp. 2d at 68 (FF 239), documents prepared by AOL's investment bankers summarizing its due diligence investigation of Netscape reported that Navigator was present on "22% of OEM shipments with minimal promotion" and that Netscape paid "[n]o compensation to OEMs for distribution." J.A. 12642. Confronted with those documents, plaintiffs' economist, Fisher, acknowledged that Barksdale's earlier testimony that Netscape was "basically out" of the OEM channel, J.A. 5168, had been an "exaggeration," J.A. 8926-28.

The same due diligence documents reported that Navigator accounted for a "24% share of top 20 ISP's distributions" and was the "[d]efault browser on all [Regional Bell Operating Company] and Earthlink distributions. J.A. 12642; *see also* J.A. 4424-25; J.A. 3896-97, 3920-21,

3924, 3925-26; J.A. 16895-96, 16897-98; J.A. 12731; J.A. 12885-87. When confronted with these documents, Fisher acknowledged that Barksdale's testimony that Microsoft had foreclosed Netscape from the IAP channel (ISPs and OLSs) was, once again, an "exaggeration." J.A. 8928.

Netscape also has distributed large quantities of Navigator (i) directly to corporate and educational customers, (ii) through various retail channels, and (iii) bundled with other software and hardware products. J.A. 2973-74; J.A. 4388-89; J.A. 3501-02. Moreover, Netscape has mailed Navigator directly to home users. 84 F. Supp. 2d at 98 (FF 357). AOL's Colburn testified that similar direct mailings have been a "successful and efficient" means for AOL to acquire subscribers. J.A. 5301. Finally, pursuant to its "Netscape Everywhere" and "Unlimited Distribution" programs, Netscape enlisted thousands of third parties to distribute *more than 100 million copies* of Navigator. J.A. 4390, 4391; J.A. 3502; J.A. 4868-70, 4879-80; J.A. 10717; J.A. 10727; J.A. 11770; J.A. 11900; J.A. 12162; J.A. 12165; J.A. 12559.

Netscape's total distribution of Navigator through these many channels is staggering, far exceeding the total number of Internet users. By the end of 1997, Netscape estimated that it had distributed nearly 200 million copies of Navigator, including over 100 million in 1997 alone. J.A. 4390; *see also* J.A. 10727 The numbers for 1998 are even more impressive. Crediting the documents summarizing AOL's due diligence investigation of Netscape, J.A. 12642, the district court found that "Netscape was able to distribute 160 million copies of Navigator" in 1998, "contributing to an increase in its installed base from 15 million in 1996 to 33 million in December 1998." 87 F. Supp. 2d at 53. This number is expected to grow to 100 million over the next couple of years. J.A. 9468. The dramatic growth in Navigator's installed base shows that Netscape has been successful not only in distributing Navigator, but also in getting millions of

users to use Navigator instead of IE, even though IE is present on every PC running Windows 95 or Windows 98. *See* 84 F. Supp. 2d at 103 (FF 378).

2. This Court's June 1998 Decision

On October 20, 1997, following the release of IE 4, the DOJ petitioned the district court to hold Microsoft in civil contempt for violating the Consent Decree. J.A. 152-53. The DOJ asserted that Microsoft's inclusion of IE 3 and IE 4 in Windows 95 violated the anti-tying provision of the Consent Decree, which prohibits Microsoft from conditioning the licensing of Windows on the licensing of any other product. *United States* v. *Microsoft Corp.*, 1995-2 Trade Cas. (CCH) ¶ 71,096, at 75,244 (D.D.C. Aug. 21, 1995).

Although the district court later stated that it ordered the breakup of Microsoft in part because Microsoft had "proved untrustworthy" in the Consent Decree Case, 97 F. Supp. 2d at 62, it was the DOJ that misled the court. In a November 17, 1997 memorandum entitled "Defining IE 3.0 and What Happens When It Is Removed," the DOJ's technical expert, Weadock, privately informed the DOJ that the "removal of each file provided in the IE 3.02 distribution *is not practical because it removes shared program libraries essential to the operation of Windows 95*." J.A. 11638 (emphasis added); *see also* J.A. 5952-60; J.A. 6075-79. Despite this unequivocal advice, the DOJ requested three days later that the district court enter what it described as "a simple order that would prohibit Microsoft from forcing OEMs to accept and preinstall the software code Microsoft separately distributes at retail as 'Internet Explorer 3.0'" J.A. 11714. In response, Microsoft submitted a sworn declaration explaining that removing the software code identified by the DOJ would render the resulting operating system "completely inoperable." J.A. 13527.

The district court declined to hold Microsoft in contempt, but entered a *sua sponte* preliminary injunction requiring Microsoft to offer Windows 95 to OEMs without IE. *United States* v. *Microsoft Corp.*, 980 F. Supp. 537, 545 (D.D.C. 1997). Unaware that Weadock had previously advised the DOJ that such relief was "not practical," the district court entered *in haec verba* the "simple order" the DOJ requested, "[e]njoining Microsoft *pendente lite* from forcing OEMs to accept and preinstall the software code that Microsoft itself now separately distributes at retail as 'Internet Explorer 3.0'" *Id*. at 544. The district court thereby enjoined Microsoft from requiring OEMs to preinstall the very software code that the DOJ's technical expert had told the DOJ was "essential to the operation of Windows 95." J.A. 11638. Nonetheless, the district court later took Microsoft to task for complying with the literal terms of the preliminary injunction, incredulously asking in a contempt hearing, "you thought that I had entered an order which would require you to distribute a product that would not work?" J.A. 13622.

On June 23, 1998, this Court reversed the district court's preliminary injunction. 147 F.3d at 956. After holding that the injunction was issued without adequate notice, *id*. at 943-45, the Court addressed the merits of the DOJ's claim. Noting that "[b]oth Microsoft and the Department characterize § IV(E) as an 'anti-tying' provision," *id*. at 946, the Court adopted a construction that "is consistent with the antitrust laws," *id*. at 948. Recognizing that "[c]ourts are ill equipped to evaluate the benefits of high-tech product designs," *id*. at 952, and "have on that ground rejected theories of 'technological tying,'" *id*. at 949, the Court stated that "[a] court's evaluation of a claim of integration must be narrow and deferential," *id*. at 949-50. The Court thus held that, although Microsoft "provide[d] OEMs with IE 4 on a separate CD-ROM" at the time, *id*. at 951, IE is not a separate product if there are "facially plausible benefits to

[Microsoft's] integrated design as compared to an operating system combined with a stand-alone browser such as Netscape's Navigator," *id*. at 950.

The district judge later told the press that he was "wounded" by this Court's ruling, insisting, "It was wrong-headed on several counts." BRINKLEY & LOHR, *supra* at 295. He also reportedly confessed a predisposition on the central issue in this case. Stating "I am not a fan of integration," *id*. at 263, the district judge offered a confused analogy to a 35-millimeter camera:

> You have one and you like it, right? You like the convenience of having a light meter built in, integrated, so all you have to do is press a button to get a reading. But do you think camera makers should also serve photographers who want to use a separate light meter, so they can hold it up, move it around?

Id. Of course, Microsoft *did* design Windows so that users can easily use a separate Web browser application like Navigator if they want, and tens of millions of people do. *See* 84 F. Supp. 2d at 103 (FF 378).

When Microsoft moved for summary judgment, the district court acknowledged that it was bound by this Court's June 1998 decision. 1998-2 Trade Cas. (CCH) ¶ 72,261, at 82,674. In fact, the district court expressly stated that this Court's decision articulated the controlling "framework for determining whether an integration amounts to a single product for purposes of evaluating a tying claim," *id*. at 82,675, a statement the district court would later repudiate after the case was tried based on that framework. Under this Court's decision, the district court stated, Windows and IE are a single product if the benefits of the "Windows/IE combination" cannot "be obtained by combining another browser with Windows." *Id*. at 82,676.

3. AOL's Acquisition of Netscape and Strategic Alliance with Sun

On November 24, 1998, a month after trial began, AOL agreed to acquire Netscape, a landmark transaction that sent shock waves through the computer industry. J.A. 11767; J.A. 11916. AOL is the world's largest OLS by a wide margin. J.A. 12472. As the district court

noted in November 1999, "AOL's subscribers now number sixteen million, and a substantial part of all Web browsing is done through AOL's service." 84 F. Supp. 2d at 85 (FF 304). AOL also owns CompuServe, another OLS with about 2 million subscribers. J.A. 2988. In announcing AOL's acquisition of Netscape, Steve Case stated, "We also plan to continue to aggressively develop and promote Netscape's browser, which is one of the key drivers of value for AOL and for the Netscape brand because of the browser's link to Net Center," Netscape's portal Web site. J.A. 11768. AOL's acquisition of Netscape opened up whole new avenues of distribution for Navigator. J.A. 16682; J.A. 16684; J.A. 16775; J.A. 16893.

In a related transaction, AOL entered into a three-year strategic alliance with Sun. J.A. 12513-56. AOL agreed to cooperate with Sun in promoting Sun's Java technologies for use on the Internet, later announcing that it intended to distribute as many as 100 million copies of the latest version of Sun's Java technologies with AOL's proprietary client software. J.A. 9614-16; J.A. 11772; J.A. 13515. AOL and Sun also agreed jointly to develop a "New Browser" with componentized architecture. J.A. 12515. Their agreement provided that "[t]o the extent contractually permissible, AOL will periodically evaluate replacing [IE] with the New Browser in the AOL classic online service." J.A. 12530; *see also* J.A. 12643; J.A. 16783. The day after the district court issued its conclusions of law, AOL announced its intention to replace IE with Navigator in AOL's proprietary client software as soon as possible. Frances Katz, *Netscape 6 Is Designed to Adapt to Non-PC Uses*, CHICAGO TRIB., Apr. 10, 2000, at 11; *see also* Mark Boslet, *AOL Plan for Netscape Browser May Impact Microsoft Case*, DOW JONES NEWS SERVICE, Apr. 5, 2000; Peter Loftus, *AOL's Case Wants Netscape Browser as Default on Service*, DOW JONES NEWS SERVICE, Apr. 5, 2000.

F. The Dramatic Expansion of the Case

This Court's June 1998 decision undermined the central premise of plaintiffs' case—that Microsoft had "tied" IE to Windows. Plaintiffs responded by dramatically expanding the scope of their case, raising new accusations concerning Sun, Intel, Apple, RealNetworks and IBM that were not included in their complaints. These accusations were baseless and, by and large, concerned activity with no competitive significance.

1. Sun

In their complaints, plaintiffs alluded to Java only insofar as the existence of Java purportedly provided an additional motivation for Microsoft to limit distribution of Navigator. *E.g.*, J.A. 141 ("Microsoft has recognized that the widespread use of browsers other than its own threatens to increase the distribution and use of Java, and in so doing threatens Microsoft's operating system monopoly."). Following this Court's decision, however, plaintiffs began asserting that Microsoft had unlawfully impeded marketplace acceptance of Sun's Java technologies by creating its own implementation of Java optimized to work well with Windows, an allegation that is the subject of a dispute between Sun and Microsoft. *Sun Microsystems, Inc.* v. *Microsoft Corp.*, No. C-97-20884-RMW (N.D. Cal.).

Programs written in the Java programming language are "compiled" into intermediate instructions called Java "bytecodes," which, in turn, are executed by a program called a Java Virtual Machine ("JVM"). J.A. 3817-18. Sun and others have developed JVMs for numerous different platforms, including Windows. J.A. 3844-45; J.A. 6885-86; J.A. 11739. Java programs are said to be "pure Java" (a Sun marketing term) if they contain no "native" code (*i.e.*, code unique to a specific platform) and thus consist exclusively of Java bytecodes. J.A. 3817-18. "Pure Java"

programs are supposed to run unmodified on any JVM, without regard to the underlying platform. J.A. 3806-07, 3817-18.

Microsoft entered into a license agreement with Sun that "grant[ed] Microsoft the right to distribute and make certain modifications to Sun's Java technologies." 84 F. Supp. 2d at 105 (FF 388). Microsoft was not required, however, to promote "pure Java" programs: it instead retained the right to encourage Java programmers to rely on native Windows APIs as long as Microsoft also supported the cross-platform elements of Java. J.A. 3816-17, 3865-66.

"Microsoft made a large investment of engineering resources to develop a high-performance Windows JVM" that was "attractive on its technical merits." 84 F. Supp. 2d at 107 (FF 396). In fact, Microsoft's JVM enabled "pure Java" programs to run faster and with fewer errors on Windows than on any other platform. J.A. 3826-27, 3831; J.A. 6707-08; J.A. 10772; J.A. 11737; J.A. 11742; J.A. 11753; J.A. 11762. Microsoft also created development tools, called Visual J++, that enabled ISVs to write either cross-platform Java programs or Java programs that take advantage of the unique features and functionality of Windows. J.A. 3827-29.

J/Direct. The district court found that "Microsoft independently developed methods for enabling 'calls' to 'native' Windows code" (called J/Direct) that differed from Sun's preferred method (called "Java Native Interface" or "JNI"). 84 F. Supp. 2d at 105 (FF 388). Microsoft chose not to support JNI because its own J/Direct is a superior mechanism for making native Windows calls. J.A. 3815, 3852-53. Even the district court recognized that "the native methods that Microsoft produced were slightly easier for developers to use than the method that derived from the Sun-sponsored effort" and that "Java applications using Microsoft's methods tended to run faster than ones calling upon Windows APIs with Sun's method." 84 F. Supp. 2d at 105 (FF 389). More importantly, Microsoft's lack of support for JNI did not prevent "pure Java" pro-

grams from running well on Microsoft's JVM, and ISVs could use JNI to make native Windows calls if they distributed a JVM that supported JNI with their programs. J.A. 3850-51.

Remote Method Invocation. The district court stated that Microsoft refused to implement a little-used Sun technology called Remote Method Invocation ("RMI") that permits Java programs to share computing tasks. 84 F. Supp. 2d at 106 (FF 391). In accordance with its agreement with Sun, Microsoft distributed RMI free to ISVs from a Microsoft Web site. J.A. 3853-55. Once downloaded and included in a Java program, RMI works properly with Microsoft's JVM. J.A. 3855. Although the district court found that Microsoft "buried the link" to RMI "in an obscure location" on the Web site, 84 F. Supp. 2d at 106 (FF 392), there is no evidence that any ISV had any difficulty obtaining access to RMI or that ISVs wrote fewer "pure Java" programs as a result of RMI's placement on the Microsoft Web site.

Visual J++ 6.0. The district court found that "Microsoft designed its Java developer tools to encourage developers to write their Java applications using certain 'keywords' and 'compiler directives' that could only be executed properly by Microsoft's [JVM]." 84 F. Supp. 2d at 106 (FF 394). Microsoft included certain keywords and compiler directives in Visual J++ 6.0 that made it fast and easy for Java programs to call native Windows APIs. J.A. 3855-63. But use of those enhancements—and of Visual J++ 6.0 generally—is a matter of choice for ISVs. J.A. 3859-61. There is also no dispute that ISVs can use Visual J++ 6.0 to write "pure Java" applications that will run on any properly-designed JVM. J.A. 3828. Although the district court stated that Microsoft designed Visual J++ 6.0 so that ISVs would "unwittingly write Java applications that would run only on Windows," 87 F. Supp. 2d at 43, there is no evidence that *any* ISV that wanted to write a "pure Java" program ever unwittingly used Microsoft's keywords or compiler directives. J.A. 3861; J.A. 11735.

First Wave Agreements. The district court found that Microsoft's First Wave agreements required certain ISVs to distribute Microsoft's JVM. 84 F. Supp. 2d at 108-09 (FF 401). The First Wave agreements, however, did not prevent ISVs from making their Java programs compatible with non-Microsoft JVMs or from distributing those other JVMs with their Java programs. J.A. 9995-96.

Intel's Support of Java. According to the district court, Microsoft "pressured" Intel to "abstain from aiding in Sun's" Java development work. 87 F. Supp. 2d at 43. Believing that Sun's Java strategy, if successful, would take customers away from both Microsoft and Intel, Microsoft attempted to convince Intel that supporting Sun's Java plans was contrary to Intel's interest. J.A. 3771-72. There is no evidence that Intel felt compelled to follow Microsoft's advice on this subject or that Intel reduced its support for Java as a result of anything Microsoft said. Indeed, Intel continued to support Java long after the discussions in question occurred. J.A. 3772; *see also* J.A. 5730-31; J.A. 9906.

2. Intel

"Although Intel is engaged principally in the design and manufacture of microprocessors, it also develops some software. Intel's software development efforts . . . are directed primarily at finding useful ways to consume more microprocessor cycles, thereby stimulating demand for advanced Intel microprocessors." 84 F. Supp. 2d at 34 (FF 95). At trial, plaintiffs asserted that Microsoft interfered with Intel's release of Native Signal Processing ("NSP") software in 1995, an allegation that appeared nowhere in their complaints. The initial purpose of NSP software was to enable Intel microprocessors to perform tasks (such as those relating to sound generation) usually performed by separate devices known as "Digital Signal Processors." J.A. 3762. Intel

subsequently expanded its use of the term "NSP" to refer to a package of unrelated software, such as power management software for notebook computers. J.A. 3762.

Microsoft and Intel must work closely together to ensure that their operating systems and microprocessors are compatible. J.A. 3758-59; J.A. 5578-79; J.A. 11579; J.A. 13119-20. In the spring of 1995, Intel first informed Microsoft of its imminent plans to release NSP software, which was designed to run *only* on Windows 3.1 and thus was incompatible with both Windows 95 (then in final stages of testing) and Windows NT (released two years earlier). J.A. 3762-63; J.A. 5588; J.A. 13183-84, 13200, 13204-06. Microsoft expressed concern that Intel's NSP software would not work with Microsoft's two 32-bit operating systems. J.A. 3763; J.A. 11582. In response, various Intel executives acknowledged that Intel had made a mistake in developing NSP software for Windows 3.1. J.A. 5585-86; J.A. 13183-84; *see also* J.A. 9904 ("[Dr. Grove] felt bad that the software was focused on Windows 3.1 and not Windows 95 or NT. He says that was a mistake.").

Along with its concerns about compatibility, "Microsoft also complained that Intel had not subjected its software to sufficient quality-assurance testing. Microsoft was quick to point out that if Windows users detected problems with the software that came pre-installed on their PC systems, they would blame Microsoft or the OEMs, even if fault lay with Intel." 84 F. Supp. 2d at 35 (FF 99). At Intel's request, Microsoft agreed to study Intel's NSP software and provide feedback. J.A. 3763. Microsoft prepared a memorandum entitled "Microsoft NSP Analysis and Recommendation," which identified more than a dozen major problems with NSP software. J.A. 11677. Intel ultimately decided to discontinue its efforts to promote NSP software for Windows 3.1, and instead work with Microsoft to ensure that NSP software was compatible with Windows 95. J.A. 3765; J.A. 5617; J.A. 13190.

The district court acknowledged that "Microsoft's concerns with compatibility and quality were genuine," but found that Microsoft's primary concern was that "NSP software would render ISVs, device manufacturers, and (ultimately) consumers less dependent on Windows." 84 F. Supp. 2d at 35 (FF 99). The district court also recognized, however, that "[t]he development of an alternative platform to challenge Windows was not the primary objective of Intel's NSP efforts." *Id*. (FF 101); *see also* J.A. 13187. And there is no finding that NSP software had any potential to displace Windows as a platform for applications.

In any event, Microsoft worked with Intel to make NSP software suitable for use with Windows 95 and Windows NT. J.A. 3765; J.A. 5643; J.A. 13190-91, 13200. Although the district court found that Intel later "agreed to stop developing platform-level interfaces that might draw support away from interfaces exposed by Windows," 84 F. Supp. 2d at 36 (FF 102), the testimony of both Steven McGeady and Ron Whittier of Intel is to the contrary. McGeady admitted that Intel did not change its software development policies after 1995, J.A. 5697-99, and Whittier testified that Intel did not reduce its efforts to develop "platform level software," J.A. 13192-93.

3. Apple

At trial, plaintiffs challenged two aspects of Microsoft's relationship with Apple, neither of which was mentioned in their complaints: (i) Microsoft's discussions with Apple concerning Apple's QuickTime multimedia software and (ii) a wide-ranging, mutually-beneficial business relationship that Apple and Microsoft entered into in August 1997.

QuickTime. "QuickTime is Apple's software architecture for creating, editing, publishing, and playing back multimedia content (*e.g.*, audio, video, graphics, and 3-D graphics)." 84 F. Supp. 2d at 36 (FF 104). Apple created QuickTime as a component of Apple's Mac OS and later

ported QuickTime to Windows and other operating systems. J.A. 3115; J.A. 10488; J.A. 10442-43. Microsoft has included similar multimedia software, now called DirectX, in its operating systems since the release of Windows 3.1 in 1992. J.A. 3555-56. Windows users can access DirectX multimedia content through a user interface called Windows Media Player. J.A. 3557. DirectX also provides a set of system services that ISVs can invoke to obtain multimedia capabilities for their applications. J.A. 3556.

Contrary to plaintiffs' suggestion, Microsoft never told Apple to stop developing QuickTime for Windows. Before Microsoft began talking with Apple about multimedia playback software, Apple sought to persuade Microsoft to abandon DirectX in favor of QuickTime. J.A. 3570-71; J.A. 12175; J.A. 12918-19; J.A. 16962-63, 16965; J.A. 13262-63. Microsoft declined and, starting in 1997, sought to persuade Apple to cooperate in improving DirectX on the ground that having incompatible multimedia playback software on Windows was not in the interests of either company's customers or the industry. J.A. 3550, 3552, 3569; J.A. 12907-08; *see also* 84 F. Supp. 2d at 37 (FF 110); J.A. 3564; J.A. 12921. Microsoft made it clear, however, that such collaboration would not preclude Apple from continuing to develop and market QuickTime for Windows. J.A. 3569-70. For instance, Apple could have built its own user interface on top of the unified multimedia playback software in Windows to compete with Windows Media Player. J.A. 3552-53, 3569-70, 3585.

"The discussions over multimedia playback software culminated in a meeting between executives from Microsoft and Apple executives, including Apple's CEO, Steve Jobs, at Apple's headquarters on June 15, 1998." 84 F. Supp. 2d at 37 (FF 108). At that meeting, Microsoft's Engstrom reviewed with Apple a slide presentation entitled "QuickTime/DirectX Convergence Proposal." J.A. 12177; *see also* J.A. 3579-86. Engstrom again sought Apple's cooperation in

developing unified multimedia playback software for Windows based on DirectX, and Apple again urged Microsoft to abandon DirectX in favor of QuickTime. J.A. 3583; J.A. 5477-78. No consensus was reached, however, because neither company was willing to embrace the other's technology. Although Apple's Jobs "reserved comment during the meeting with the Microsoft representatives," he "explicitly rejected Microsoft's proposal a few weeks later." 84 F. Supp. 2d at 37 (FF 109).

The district court incorrectly found that Microsoft offered to cede to Apple the development of APIs for authoring media content if Apple accepted Microsoft's proposal. 84 F. Supp. 2d at 36 (FF 105). What Microsoft told Apple was that if Apple created authoring APIs targeted at DirectX, Microsoft would not have to invest the resources necessary to do so itself. J.A. 8687-88. Microsoft also made clear that if the two companies did not work together on unified multimedia playback software for Windows, Microsoft would continue developing DirectX on its own, including APIs for authoring multimedia content, because a complete multimedia solution requires both authoring and playback capabilities. J.A. 3578-79.

The August 1997 Agreements. "In 1997, Apple's business was in steep decline, and many doubted that the company would survive much longer." 84 F. Supp. 2d at 94 (FF 344). For several years, Apple had asserted that several Microsoft products, including Windows and Office, infringed 24 Apple patents. J.A. 3782. Microsoft believed that Apple's patent infringement claims were baseless, but nevertheless was concerned that Apple might sue as part of a "go for broke" strategy. J.A. 3782-83. In March 1997, Apple asserted that Microsoft should pay Apple $1.255 billion for a patent cross-license, J.A. 5379-83; J.A. 10001, an amount approximately equal to Apple's total net worth at the time, J.A. 3783.

Throughout the spring and early summer of 1997, Apple and Microsoft unsuccessfully attempted to resolve their patent dispute. J.A. 3783-84. Microsoft informed Apple that if Apple filed an infringement action seeking a billion dollars in damages, Microsoft could not deal with Apple on a "business as usual" basis, and might cease developing Office for the Macintosh. J.A. 3784; J.A. 9911. Wholly apart from this patent dispute, Microsoft saw little business justification for continuing to develop Office for the Macintosh when the developers involved could be more profitably deployed on Office for Windows. J.A. 3787-88; J.A. 12465. In fact, "[o]bserving Apple's poor performance in the marketplace and its dismal prospects for the future, many ISVs questioned the wisdom of continuing to spend time and money developing applications for the Mac OS." 84 F. Supp. 2d at 94 (FF 344).

On July 9, 1997, Steve Jobs replaced Gil Amelio as Apple's CEO. J.A. 3784-85. Apple and Microsoft thereafter quickly hammered out three interrelated agreements, announced on August 7, 1997, that resolved a variety of open issues. J.A. 3784-85, 3788, 3790-91; J.A. 12464. Pursuant to a patent cross-license (J.A. 9951), Microsoft paid Apple $93 million for the right to use Apple's patents. J.A. 16001. Pursuant to an investment agreement (J.A. 9913), Microsoft purchased $150 million of non-voting Apple preferred stock, providing Apple with a much-needed capital infusion. J.A. 3788, 3789. And, pursuant to a technology agreement (J.A. 10116), Microsoft agreed to develop the same number of major versions of Office for the Macintosh as it developed for Windows over the next five years, and Apple agreed to make IE for the Macintosh the default Web browsing software for the Mac OS for the same period as long as that version of IE remained "competitive" with other Web browsers. J.A. 3789-90; J.A. 10119-21. Apple reserved the right, however, to "bundle browsers other than Internet Explorer" with the Mac OS, and, in fact, bundles both IE and Navigator with the Mac OS today. J.A. 10119; *see also*

J.A. 3789-90. (IE for the Macintosh was designed, developed and tested from the ground up as Macintosh software, and thus is very different from the components of Windows also referred to by the "IE" brand name. *See* J.A. 4465-66; J.A. 3791-92.)

The district court found that Microsoft "requir[ed] Navigator's exclusion from the default installation for the Mac OS 8.5 upgrade." 84 F. Supp. 2d at 97 (FF 356). The technology agreement required, however, only that Navigator or any other Web browsing software be included in "folders" in the Mac OS like the OLS folder in Windows. J.A. 10119-20. Moreover, contrary to the district court's suggestion that Apple's "browsing software" obligation was the quid pro quo for Microsoft's Mac Office obligation, 84 F. Supp. 2d at 96 (FF 354), Apple's Avie Tevanian testified that *all* of the various obligations (the patent cross-license, Microsoft's investment and the technology agreement) were part of one "overall agreement" between the two companies, J.A. 5402-03.

4. RealNetworks

Plaintiffs contended at trial that Microsoft attempted to persuade RealNetworks—a company not even mentioned in their complaints—not to compete with Microsoft in developing playback software for streaming audio and video content. Unlike other types of multimedia content, streaming media content is viewable before an entire file is downloaded from the Internet, simulating "live" broadcasting. J.A. 3555; J.A. 3871. Although Microsoft had been developing streaming media playback software for several years, it had fallen behind other companies, particularly RealNetworks. J.A. 3872. This led Microsoft to acquire VXtreme in 1997 to obtain their streaming media technology and developers with expertise in that area. J.A. 3872.

Shortly thereafter, RealNetworks approached Microsoft to discuss the creation of what RealNetworks described as a "fundamental relationship" between the companies. J.A. 7699-7700; J.A. 10366-67. Microsoft agreed with RealNetworks to (i) make a non-voting equity investment in RealNetworks, (ii) license RealNetworks' streaming media playback software for inclusion in Windows 95, and (iii) cooperate in developing a common file format for streaming media content. J.A. 3873; J.A. 16613. The agreements did not inhibit RealNetworks from continuing to develop streaming media playback software for Windows. J.A. 3874; J.A. 7700-02.

Not long after the agreements were signed, RealNetworks manifested an intention not to comply with its obligations, refusing to work with Microsoft to create a standard file format for streaming media. J.A. 3876-77. In fact, Microsoft's Bob Muglia described RealNetworks' conduct at the time as "a full-scale, anti-Microsoft assault." J.A. 12568. In any case, Microsoft's agreements with RealNetworks had no market impact: RealNetworks remains the clear usage share leader in streaming media playback software, both on Windows and on other platforms. J.A. 3558-59; J.A. 12836; *see also* 84 F. Supp. 2d at 38 (FF 114).

5. IBM

On the one issue relevant to plaintiffs' complaints—distribution of Navigator—IBM's Garry Norris testified that IBM began preinstalling Navigator on its computers in 1996 and continues to do so today. J.A. 9227. At trial, however, plaintiffs advanced many contentions about Microsoft's dealings with IBM that were unrelated to the claims asserted in their complaints. For example, they contended that Microsoft treated IBM less favorably than it did other OEMs—particularly Compaq—because IBM marketed products that compete with Microsoft products. In fact, Compaq had the lowest royalty for Windows 95 of any OEM both because it shipped a higher volume of Microsoft's operating systems and because it helped

develop plug-and-play technologies, an important new feature of Windows 95. J.A. 4001, 4003-04; J.A. 9026-27; J.A. 13425; J.A. 13503. By contrast, IBM—which was promoting its own operating system, OS/2, at the time—did nothing to help Microsoft develop Windows 95, and thus paid a somewhat higher royalty for it. J.A. 9031-32. Microsoft offered IBM a "Frontline Partnership" similar to Microsoft's arrangement with Compaq, but IBM declined, opting instead to pursue its "IBM First" initiative. 84 F. Supp. 2d at 39 (FF 117, 119); *see also* J.A. 4003-04; J.A. 13433-34.

The district court suggested that Microsoft did not grant IBM a Windows 95 license until the operating system's launch date because IBM previously had announced its intention to pre-install SmartSuite, a suite of business productivity applications that competes with Microsoft Office, on new IBM computers. 84 F. Supp. 2d at 40-41 (FF 122-25). Yet IBM's Norris disavowed any connection between IBM's SmartSuite announcement and the subsequent impasse in negotiations over a Windows 95 license. J.A. 9129-30. The impasse instead arose because an ongoing audit of IBM's royalty payments to Microsoft had revealed substantial underpayments by IBM. J.A. 13485; J.A. 13487. Although Microsoft estimated that IBM owed it more than $50 million, J.A. 9134; J.A. 10663, Microsoft agreed to settle the audit for $31 million, J.A. 13490. IBM and Microsoft signed a Windows 95 license agreement the same day they settled the audit—the Windows 95 launch date. J.A. 8996-97; J.A. 9172. The district court found that "IBM never agreed to renounce SmartSuite or to increase its support for Microsoft software." 84 F. Supp. 2d at 41 (FF 125).

The district court also found that Microsoft withheld technical and marketing support from IBM that other OEMs received. *Id.* at 39 (FF 116). For example, the district court noted that Microsoft in August 1996 refused to provide IBM with quotations endorsing IBM PCs for

use in IBM press releases. *Id*. at 42 (FF 126). Microsoft would not publicly endorse IBM products at that time because IBM was publicly attacking Microsoft products, especially Windows 95. J.A. 13454; J.A. 13472; J.A. 13480; J.A. 13483; J.A. 13500. As one IBM document (J.A. 13498) explained,

> Microsoft believes that IBM is out to "annihilate" Microsoft and this perception, (reality), has made any cooperation almost impossible. At a minimum, Microsoft would like IBM to stop "disparaging" their products in public.

The district court further found that Microsoft denied IBM access to certain marketing programs to which Compaq, Hewlett-Packard and DEC had access. 84 F. Supp. 2d at 42 (FF 128). Microsoft excluded the IBM PC Company from those programs for a legitimate reason: Microsoft was concerned that IBM would use those programs to gain entrée to customers and then attempt to sell them IBM products instead of Microsoft products. J.A. 13506; *see also* J.A. 9221-23, 9226.

SUMMARY OF ARGUMENT

The entire proceeding below was infected with error. Revealing a profound misunderstanding of the antitrust laws, the district court condemned Microsoft's competitive response to the phenomenal growth of the Internet and the emergence of Netscape as a platform competitor. Far from violating the antitrust laws, Microsoft's conduct was procompetitive, producing enormous consumer benefits. Thomas W. Hazlett, *Microsoft's Internet Exploration*, 9 CORNELL J.L. & PUB. POL'Y 29, 52 (1999) ("The facts of the 'browser war' lead inexorably to one conclusion: consumers have benefited enormously from the ferocious rivalry between Netscape and Microsoft."). The district court branded Microsoft's actions anticompetitive even though it recognized that Microsoft did not foreclose Netscape from the marketplace. In addition, the district court's handling of the case was fundamentally flawed, invariably to Microsoft's detriment, culminating in the imposition of the draconian relief requested by plaintiffs, including a

breakup of the company, without holding a hearing. Then, in an attempt to defend his rulings, the district judge embarked on a speaking tour, which followed his extrajudicial discussions with reporters during trial. The district judge's public comments about the merits of the case, together with his improper handling of the litigation, undermine all confidence in the integrity of the proceedings. This Court should reverse the judgment below and direct entry of judgment for Microsoft for the following reasons.

1. The district court erroneously held that Microsoft's design of Windows to include Web browsing software constituted a tie in violation of Section 1. *First*, Windows and IE are not "separate products" under this Court's standard because there are significant benefits to the integrated design of Windows that cannot be duplicated by combining an operating system with a standalone Web browser like Navigator. *Second*, Microsoft's design of Windows did not foreclose competition from rival Web browsers. Navigator is "perfectly interoperable" with Windows, and Netscape has access to "every PC user worldwide" to offer its products. Moreover, because IE and Navigator are available at no charge, there is no financial disincentive for Windows users to obtain a copy of Navigator to use instead of, or in addition to, IE. In fact, Windows users can use IE to download Navigator from the tens of thousands of Web sites that have a "Netscape Now" button. Millions have done so.

2. The district court erroneously held that Microsoft maintained a PC operating system monopoly in violation of Section 2. *First*, Microsoft cannot control prices or exclude competition, and thus does not possess monopoly power in a properly defined market. *Second*, Microsoft did not engage in anticompetitive conduct because it did not foreclose Navigator or Java from any marketplace. The district court's monopoly maintenance ruling was based almost entirely on the same conduct that plaintiffs challenged as tying and exclusive dealing under Sec-

tion 1. But that conduct was not anticompetitive under Section 2 for the same reasons that it did not unreasonably restrain trade under Section 1—it was not exclusionary. Indeed, Microsoft's conduct was not anticompetitive in any respect: (i) including IE in Windows improved the operating system, providing benefits to users, ISVs and OEMs; (ii) the challenged provisions of Microsoft's OEM license agreements simply restate Microsoft's right under federal copyright law to prevent unauthorized alteration of its copyrighted operating systems and, in any event, "excluded" no one; (iii) Microsoft's agreements with IAPs (*i.e.*, ISPs and OLSs) did not deny Netscape access to the marketplace (which the district court recognized in rejecting plaintiffs' exclusive dealing claim); and (iv) Microsoft's Java implementation gave ISVs additional choices and did not prevent the development of "pure Java" programs. *Third*, none of the conduct alleged to be anticompetitive was causally related to Microsoft's continued success in the operating system business. In other words, none of it contributed significantly to "maintenance" of the alleged monopoly.

3. The district court erroneously held that Microsoft attempted to monopolize the "browser" market in violation of Section 2. *First*, as explained above, Microsoft's vigorous competition with Netscape to develop and market improved Web browsing software was not anticompetitive because nothing Microsoft did foreclosed Navigator from the marketplace. *Second*, Microsoft did not act with a "specific intent" to monopolize, but rather sought to prevent Navigator from dominating the alleged "browser" market. *Third*, there is no "dangerous probability" that Microsoft will achieve monopoly power in the alleged "browser" market: Microsoft's June 1995 discussions with Netscape did not create such a probability, and none exists now. Indeed, AOL could (and says it will) switch more than one-third of IE's users to Navigator.

4. The extreme relief entered by the district court is unsustainable. *First*, the district court entered sweeping relief unsupported by the trial record without conducting an evidentiary hearing and affording Microsoft an opportunity to develop and present evidence. *Second*, the district court's findings and conclusions do not justify the dissolution of Microsoft. *Third*, the district court's so-called "conduct" remedies—particularly the forced disclosure of Microsoft's intellectual property and regulation of Microsoft's operating system design—are punitive and excessive in relation to the asserted antitrust violations, and these remedies will harm, rather than benefit, consumers.

5. The district court committed reversible error in its handling of the case. *First*, the district court failed to afford Microsoft adequate discovery and opportunity to prepare and present its defenses to plaintiffs' dramatically expanded case. *Second*, the district court admitted into evidence (and apparently relied on) large amounts of inadmissible hearsay. Indeed, by limiting each side to 12 "summary witnesses" in the face of plaintiffs' expanded case, the district court virtually ensured extensive reliance on hearsay.

6. The district judge's repeated public statements about the merits of this case, including comments made during the trial itself, violated the Code of Conduct for United States Judges and would cause an objective observer seriously to doubt his impartiality. These public comments alone require that the judgment be vacated. Thus, if any part of the judgment is not reversed as a matter of law, the judgment should be vacated in its entirety and the remainder of the case remanded to a different judge for a new trial.

ARGUMENT

This Court's review of the district court's conclusions of law is *de novo*. *United States ex rel. Modern Elec., Inc.* v. *Ideal Elec. Sec. Co.*, 81 F.3d 240, 244 (D.C. Cir. 1996). This Court

also should reverse the district court's findings of fact if "clearly erroneous." FED. R. CIV. P. 52(a). Although entitled to deference, a trial court's findings are "never conclusive." *United States* v. *U.S. Gypsum Co.*, 333 U.S. 364, 395 (1948). "A finding is 'clearly erroneous' when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed." *Id.*

Even accepting the district court's findings, its conclusion that Microsoft violated the Sherman Act is unsustainable.[1] At bottom, the district court condemned Microsoft for competing on the merits with two other platforms: Navigator and Java. Recognizing that those platforms had the potential to supplant Windows as a leading platform for applications, Microsoft (i) improved Windows to satisfy demand for Internet-related functionality, (ii) distributed those improvements broadly to users, and (iii) "evangelized" third parties to use Microsoft's new technology in their products. This conduct was unambiguously procompetitive: it benefited consumers by (i) lowering prices, (ii) ensuring widespread availability of new technology, and (iii) accelerating product improvement. At the same time, Microsoft did nothing that foreclosed Netscape and Sun from the marketplace. Microsoft thus was held to have violated the antitrust laws for doing exactly what those laws expect and encourage competitors to do.

I.

Microsoft's Design of Windows Is Not an Unlawful Tie.

The district court held that "Microsoft's combination of Windows and Internet Explorer" was a tie in violation of Section 1. 87 F. Supp. 2d at 47. A tying arrangement is "an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or

[1] The States "concede[d] that their laws do not condemn any act" challenged in this case "that fails to warrant liability under the Sherman Act." 87 F. Supp. 2d at 55.

tied) product, or at least agrees that he will not purchase that product from any other supplier." *N. Pac. Ry. Co.* v. *United States*, 356 U.S. 1, 5-6 (1958). In condemning Microsoft's design of Windows, the district court became the first court to sustain a "technological tying" claim.

Plaintiffs' tying claim fails for two independently sufficient reasons. First, Windows and IE are not "separate products" under any rational test—including the governing standard articulated by this Court—because the inclusion of IE in Windows improved the product, satisfying pervasive demand for Internet-related functionality. Second, the alleged tie did not foreclose competition in the "browser" market, and thus did not unreasonably restrain trade in violation of Section 1. Indeed, the absence of foreclosure is so clear here that this Court can reject plaintiffs' tying claim without even reaching the "separate products" issue.

A. Windows Is a Single Product.

"Before an unlawful tying arrangement may properly be found, . . . it must be determined that 'two separate products are in fact involved.'" *Foster* v. *Md. State Sav. & Loan Ass'n*, 590 F.2d 928, 931 (D.C. Cir. 1978) (quoting *Fortner Enters., Inc.* v. *U.S. Steel Corp.*, 394 U.S. 495 (1969)), *cert. denied*, 439 U.S. 1071 (1979). The district court held that Windows and IE are separate products because "consumers today perceive operating systems and browsers as separate 'products,' for which there is separate demand." 87 F. Supp. 2d at 49. The district court thereby rejected this Court's June 1998 decision, stating that this Court's test was inconsistent with the Supreme Court's decisions in *Jefferson Parish* and *Kodak*. *Id.* at 47.

The district court's "consumer-demand" test would chill innovation to the detriment of consumers by preventing firms from integrating into their products new functionality previously provided by standalone products—and hence, by definition, subject to separate consumer demand. *See* J.A. 4461-65. Even one of plaintiffs' experts on relief, Carl Shapiro, agreed that

"innovation often takes place in the computer industry through the integration of various capabilities or functions into a single piece of hardware or software." J.A. 2565. For instance, word processors now include spell checkers and PCs now include built-in modems—even though both features used to be sold separately as add-on products. *See* J.A. 4462-63; J.A. 3303-04; J.A. 4009. Under the "consumer-demand" test, the addition of such features—which plainly benefited consumers—could be challenged as an unlawful tie, thus requiring judges and juries to second-guess product design decisions. Moreover, if OEMs were permitted to remove from Windows any feature of the operating system for which there is arguably separate consumer demand, the number of different versions of Windows would proliferate, undermining the operating system as a stable, well-defined platform for applications.

1. The District Court Erred by Refusing To Follow Circuit Precedent.

Although it construed a consent decree provision, this Court's June 1998 decision is "consistent with the antitrust laws." 147 F.3d at 948. In fact, in ruling on Microsoft's summary judgment motion, the district court acknowledged that this Court had "articulate[d] a framework for determining whether an integration amounts to a single product for purposes of evaluating a tying claim." 1998-2 Trade Cas. (CCH) ¶ 72,261, at 82,675. The district court similarly noted in its conclusions of law that this Court had "anticipated the instant case" and "sought to guide [the district court], insofar as practicable, in the further proceedings it fully expected to ensue on the tying issue." 87 F. Supp. 2d at 47.

According to this Court, "[a]ntitrust scholars have long recognized the undesirability of having courts oversee product design, and any dampening of technological innovation would be at cross-purposes with antitrust law." 147 F.3d at 948. This Court thus stressed that "[a] court's evaluation of a claim of integration must be narrow and deferential." *Id*. at 949-50. "'Any other conclusion,'" the Court noted, "'would enmesh the courts in a technical inquiry into the justifia-

bility of product innovations.'" *Id*. at 950 (quoting *Response of Carolina, Inc.* v. *Leasco Response, Inc.*, 537 F.2d 1307, 1330 (5th Cir. 1976)).

Applying these settled principles, this Court held that Windows 95 and IE 4—which were distributed on separate CD-ROMs at the time—are a single, integrated product if there are "facially plausible benefits to [Microsoft's] integrated design as compared to an operating system combined with a stand-alone browser such as Netscape's Navigator." *Id*. The Court "emphasize[d] that this analysis does not require a court to find that an integrated product is superior to its stand-alone rivals," and added that "[t]he question is not whether the integration is a *net* plus but whether there is a plausible claim that it brings some advantage." *Id*. (emphasis in original).

The district court was not at liberty to disregard this Court's decision, even if it thought the decision was "wrong-headed." BRINKLEY & LOHR, *supra* at 295. District courts "are obligated to follow controlling circuit precedent" until either this Court, sitting en banc, or the Supreme Court, overrules it. *United States* v. *Torres*, 115 F.3d 1033, 1036 (D.C. Cir. 1997).

2. This Court Articulated the Correct Test for Evaluating Whether Windows and IE Are Separate Products.

Contrary to the district court's assertion, 87 F. Supp. 2d at 48-49, this Court's decision is not inconsistent with *Jefferson Parish* and *Kodak* because neither of those cases involved integrated products. *Jefferson Parish* dealt with a package of separate services—hospital services and anesthesiological services—that were claimed to be "functionally integrated," but not physically or technically integrated. 466 U.S. at 19. In her concurring opinion, Justice O'Connor observed that a different rule applies to integrated products:

> All but the simplest products can be broken down into two or more components that are "tied together" in the final sale. Unless it is to be illegal to sell cars with engines or cameras with lenses, this analysis must be guided by some limiting principle.

Id. at 39 (O'Connor, J., concurring).[2] *Kodak* likewise dealt with a different issue: whether replacement parts and repair service for Kodak photocopiers are separate products. 504 U.S. at 459. In contrast, "where a court is dealing with what is physically and in fact a single product," as the Court is here, the antitrust laws do "not contemplate judicial dissection of that product into parts and reconstitution of these parts into a tying arrangement." *Telex Corp.* v. *IBM*, 367 F. Supp. 258, 347 (N.D. Okla. 1973), *rev'd on other grounds*, 510 F.2d 894 (10th Cir.), *cert. dismissed*, 423 U.S. 802 (1975).

In the prior appeal, the DOJ cited both *Jefferson Parish* and *Kodak* "for the proposition that products are distinct for tying purposes if consumer demand exists for each separately." 147 F.3d at 946. This Court, however, expressly distinguished both cases. In discussing *Kodak*, the Court stated: "we doubt that [the Supreme Court] would have subjected a self-repairing copier to the same analysis; i.e., the separate markets for parts and services would not suggest that such an innovation was really a tie-in." *Id*. at 950. The Court further stated that applying the "consumer-demand" test used in the different circumstances of *Jefferson Parish* and *Kodak* would stymie innovation by "thwart[ing] Microsoft's legitimate desire to continue to integrate products that had been separate—and hence necessarily would have been provided in distinct markets." *Id*. at 953. "By its very nature," this Court explained, "'integration' represents a change from a state of affairs in which products were separate, to one in which they are no longer." *Id*. Indeed, under the "consumer-demand" test, Windows 95 itself could be considered two separate products

[2] *See also Jack Walters & Sons Corp.* v. *Morton Bldg., Inc.*, 737 F.2d 698, 704 (7th Cir.) (Posner, J.) ("There are separate markets for sugar and for sugarless breakfast cereals, but it would be surprising to find that a sugary cereal was a tie-in (sugar tied to cereal), assuming the seller refused to sell a sugar-free version."), *cert. denied*, 469 U.S. 1018 (1984); X PHILLIP E. AREEDA ET AL., ANTITRUST LAW ¶ 1745d2, at 211 (1996) [hereinafter AREEDA].

because it includes the functionality of both MS-DOS and Windows 3.1—although even the DOJ has rightly conceded that Windows 95 is a single product. J.A. 11705-07.

This Court's decision is consistent with other cases rejecting technological tying claims. "[M]ost important innovations involve the bundling of previously unbundled items." X AREEDA ¶ 1746, at 224. Particularly in the case of software, the innovation often is "to integrate previously unbundled inputs into a new product design that results in better combined performance than could be obtained if the items were offered unbundled and combined by purchasers." *Id*. ¶ 1746b, at 226. Because courts "lack the technical expertise to judge product design," allowing tying inquiries to proceed in such circumstances "is likely to result in errors that would deter socially desirable innovations and variations in product design." *Id.* Courts thus have held that combinations of previously separate items are a single product for tying law purposes if the combination results in an improvement, a standard that Microsoft's inclusion of IE in Windows easily satisfies. *E.g.*, *Info. Res., Inc.* v. *A.C. Nielsen Co.*, 615 F. Supp. 125, 129-30 (N.D. Ill. 1984); *Int'l Data Processing, Inc.* v. *IBM*, 585 F. Supp. 1470, 1476 (D.N.J. 1984); *ILC Peripherals Leasing Corp.* v. *IBM*, 448 F. Supp. 228, 230-34 (N.D. Cal. 1978), *aff'd sub nom. Memorex Corp.* v. *IBM*, 636 F.2d 1188 (9th Cir. 1980), *cert. denied*, 452 U.S. 972 (1981); *Telex*, 367 F. Supp. at 342, 346-47. A defendant's intent has *no* bearing on this inquiry. "Good intentions will not change two products into one, and likewise, a single product does not become separate and distinct products because of a malevolent intent." *ILC Peripherals*, 448 F. Supp. at 234.

3. Windows and IE Are Not Separate Products under This Court's Test.

The district court invited Lawrence Lessig to participate as *amicus curiae*, stating that he was "uniquely qualified to offer advice" on "technological tying." 1999-2 Trade Cas. (CCH) ¶ 72,737, at 86,420 (D.D.C. Dec. 20, 1999). Although Lessig questioned this Court's decision, he stated that "under the Court of Appeals test, Microsoft must prevail." J.A. 2381.

a. There Are Clear Benefits to Microsoft's Integrated Design.

There can be no question that Microsoft's design of Windows to include Web browsing software—as all other modern operating systems do—resulted in "facially plausible benefits." Indeed, the evidence shows much more than "facially plausible" benefits: Microsoft's integrated design of Windows produced significant, tangible benefits for users, ISVs and OEMs. *See* J.A. 3325-39. As this Court correctly held in discussing Windows 95:

> On the facts before us, Microsoft has clearly met the burden of ascribing facially plausible benefits to its integrated design as compared to an operating system combined with a stand-alone browser such as Netscape's Navigator. Incorporating browsing functionality into the operating system allows applications to avail themselves of that functionality without starting up a separate browser application. Further, components of IE 3.0 and even more IE 4—especially the HTML reader—provide system services not directly related to Web browsing, enhancing the functionality of a wide variety of applications. Finally, IE 4 technologies are used to upgrade some aspects of the operating system unrelated to Web browsing. For example, they are used to let users customize their "Start" menus, making favored applications more readily available. They also make possible "thumbnail" previews of files on the computer's hard drive, using the HTML reader to display a richer view of the files' contents.

147 F.3d at 950-51 (footnotes and citations omitted). The integrated design of Windows 98 produces these same benefits. J.A. 3331-37 & J.A. 3412-20; *see also* J.A. 4306-13. In addition, a number of important *new* features of Windows 98, including the user interface, the HTML Help system and Windows Update feature, depend on IE and would not function if IE were removed from the operating system. J.A. 3325-32; *see also* J.A. 3333-42; J.A. 4007-08; J.A. 12061; J.A. 12061 (Video). Even plaintiffs' experts conceded that these IE-enabled features of Windows 98 provide user benefits. J.A. 5891-92, 5899-5901, 5903-04, 5906-07, 5921, 5933, 5942-43; J.A. 6042; J.A. 6052; J.A. 7007; *see also* J.A. 13136-37, 13139-48.

The district court also expressly found that "many—if not most—consumers can be said to benefit from Microsoft's provision of Web browsing functionality with its Windows operating system at no additional charge," 84 F. Supp. 2d at 55 (FF 186), and that "inclusion of Internet

Explorer with Windows at no separate charge increased general familiarity with the Internet and reduced the cost to the public of gaining access to it," *id*. at 110-11 (FF 408). The district court further acknowledged that the APIs exposed by the IE components of Windows provide benefits to ISVs, noting that "more and more ISVs have . . . enhanced their applications by designing them to take advantage of the type of content and functionality accessible through browsing software." *Id*. at 93 (FF 337); *see also id*. at 56, 58 (FF 193, 199-201); J.A. 3334; J.A. 11764 (list of 100 ISVs that have built applications that rely on system services provided by IE).

Nevertheless, the district court concluded that "[n]o consumer benefit can be ascribed . . . to Microsoft's refusal to offer a version of Windows 95 or Windows 98 without Internet Explorer." 84 F. Supp. 2d at 55 (FF 186). The same could be said, however, of any company's decision not to offer a stripped-down version of its product that might appeal to some subset of consumers. *See* J.A. 4458. The district court's observation thus sheds no light on whether an integrated design produces benefits. Although the district court found that "many consumers who need an operating system . . . do not want a browser at all," 84 F. Supp. 2d at 48 (FF 152), there could be no foreclosure of Netscape with respect to such consumers because they would not want a copy of Navigator anyway. *Jefferson Parish*, 466 U.S. at 16 ("[W]hen a purchaser is 'forced' to buy a product he would not have otherwise bought even from another seller in the tied product market, there can be no adverse impact on competition because no portion of the market which would otherwise have been available to other sellers has been foreclosed."). Moreover, this Court did not condition the right to develop integrated products on satisfying whatever separate consumer demand exists for components of such products. Indeed, this Court's decision assumed that Microsoft would *not* offer a version of Windows without IE, for if Microsoft did, the tying issue would not even arise. *N. Pac. Ry.*, 356 U.S. at 6 n.4 ("[W]here the

buyer is free to take either product by itself there is no tying problem even though the seller may also offer the two items as a unit at a single price.").

b. The Benefits Cannot Be Duplicated by Combining an Operating System with a Standalone Web Browser.

Plaintiffs did not prove, and the district court did not find, that the benefits of Microsoft's integrated design could be duplicated by combining an operating system with a "stand-alone browser" like Navigator. Rather, the district court found that Microsoft could offer "all the benefits" of Windows 98 by separately distributing a "browserless version" of Windows and IE and "allowing OEMs or consumers themselves to combine the products if they wished." 84 F. Supp. 2d at 56 (FF 191). Of course, if Microsoft did so, then the "browserless version" of Windows could not rely on IE to support features like the user interface, HTML Help and Windows Update. J.A. 3325-27, 3329, 3330. Such a product also would be less appealing to consumers, most of whom want a fully functional computing solution that is simple and easy to use "right out of the box" without installing additional software. J.A. 3303-04, 3340; J.A. 4007-09.

More importantly, the district court's finding, even if true, is beside the point. As this Court explained:

> Software code by its nature is susceptible to division and combination in a way that physical products are not; if the feasibility of installation from multiple disks meant that the customer was doing the combination, no software product could ever count as integrated.

147 F.3d at 951. Given the nature of software, the act of combination is not the running of "particular disks or CD-ROMs," but rather "the creation of the design that knits the two together." *Id.* at 951-52. Accordingly, the fact that some of the benefits of the integrated design of Windows 98 arguably could be achieved by combining a "browserless operating system" and a "service pack upgrade" that contained "Internet Explorer browsing functionality," 84 F. Supp. 2d at 55-56 (FF 188), is irrelevant to whether Windows 98 is a single product.

If the test were otherwise, this Court would have reached a different result in the prior appeal. At the time, Microsoft "provide[d] OEMs with IE 4 on a separate CD-ROM," and thus, at least superficially, OEMs were "just as capable as Microsoft of combining the browser and the operating system." 147 F.3d at 951. The Court stated, however, that "[t]he idea that in installing IE 4 an OEM is combining two stand-alone products is defective." *Id*. All that such an OEM is doing is "upgrad[ing] the purchaser's operating system to the Windows 95/IE [4] level," thus "implement[ing] Microsoft's prior integration of IE into Windows 95." *Id*. at 951 n.16. In contrast, the Court observed, "if Microsoft presented [OEMs] with an operating system and a *stand-alone browser application* [such as Navigator], rather than with the interpenetrating design of Windows 95 and IE 4, the OEMs could not combine them in the way in which Microsoft has integrated IE 4 into Windows 95." *Id*. at 952 (emphasis added).

According to the district court, the so-called "prototype removal program" developed by plaintiffs' expert, Felten, shows that it is "possible to remove Web browsing functionality from Windows 98 without adversely affecting non-Web browsing features" of the operating system. 84 F. Supp. 2d at 53-54 (FF 177). Once again, this finding is beside the point. It is almost always possible to remove a feature of an integrated product, but that does mean that the product is really two products. J.A. 3344-45. Microsoft's Allchin testified: "My hand can be surgically removed from my body, but it was certainly a well-integrated part of my body before that surgery. In the case of Windows 98, all Dr. Felten attempted to show is that if skilled programmers spend several weeks hacking around in the Windows 98 source code, some of the original functionality can be hidden from customers." J.A. 3342-43.

The district court acknowledged that "Felten's program removes only a small fraction of the code in Windows 98" and leaves undisturbed all the IE components of the operating system

that expose APIs for use by ISVs. 84 F. Supp. 2d at 55, 56 (FF 183, 193). Indeed, Felten himself admitted that more than 99.9% of Windows 98 remains after his program is run. J.A. 6935; *see also* J.A. 3346. Felten's program removes so little code because the software that provides Web browsing functionality is essential to the operation both of applications that depend on IE components and of the operating system itself. As counsel for Netscape advised the DOJ in March 1998—before this action was filed—"it simply is not possible to delete any portion of IE, or of browser functionality, from Windows 98 as presently configured without severely interfering with the operating system." J.A. 10762; *see also* J.A. 4452-53.

The software code removed by Felten's program, like the software code removed from OSR 2.0 of Windows 95 by the Add/Remove Programs utility, at most "look[s] more like a key to opening IE than anything that could plausibly be considered IE itself." 147 F.3d at 952 n.17. The district court found that "Microsoft spent more than $100 million each year developing Internet Explorer." 84 F. Supp. 2d at 43 (FF 135). Needless to say, Microsoft did not spend those sums to develop the tiny amount of software code removed by Felten. This Court has already stated that allowing OEMs to disable or "conceal IE, rather than to refuse it," fits poorly with a "tying theory." 147 F.3d at 941 n.3. In fact, this Court remarked that "allow[ing] an intermediary to hide the allegedly tied product . . . suggests the oddity of treating as separate products functionalities that are integrated in the way that Windows 95 and IE are." *Id*. at 952 n.18.

The district court suggested that Microsoft "bound" IE to Windows "by placing code specific to Web browsing in the same files as code that provided operating system functions." 84 F. Supp. 2d at 50 (FF 161). First, this suggestion is inconsistent with plaintiffs' allegation that IE is a separate product that OEMs could readily remove from Windows 98 but for Microsoft's "contractual tie-in." *Compare* J.A. 145 *with* J.A. 962, 1530-31. Second, there is no basis for the

district court's suggestion that Microsoft mixed "browsing-specific" code with other operating system code in the same files. 84 F. Supp. 2d at 53 (FF 174). Two of plaintiffs' three technical experts, Weadock and Farber, admitted that they had *never seen* the source code for Windows 95 or Windows 98. J.A., 5798; J.A. 6778, and thus can provide no support for the district court's suggestion. Plaintiffs' third technical expert, Felten, acknowledged that he did no "study of what code might be removable or not removable" from Windows 98 because it was specific to Web browsing. J.A. 6958. In contrast, Microsoft's Allchin testified without contradiction that "[t]he very same code in Windows 98 that provides Web browsing functionality" also performs essential operating system functions—not code in the same files, *but the very same software code*. J.A. 3291-92.

Remarkably, plaintiffs have *never* identified the software code they claim constitutes the separate "tied" product. In response to an interrogatory asking it to specify "the software code in Windows 98 that . . . constitutes Microsoft's 'Internet browser,'" the DOJ stated that it "does not make any 'contention' that a particular discrete set of 'files' or 'software code' in any meaningful sense 'constitute' Microsoft's Internet browser." J.A. 245. At trial, Felten, plaintiffs' only witness to study the Windows 98 source code, likewise could not identify any files or software code in Windows 98 that constitutes a separate Web browser. J.A 6923, 6938, 6957-58; J.A. 9308-10, 9338-40. Plaintiffs cannot identify the allegedly "tied" product because the very same software code that provides Web browsing functionality also supports other key features of Windows 98. J.A. 3291-92.

B. The Alleged Tie Did Not Foreclose Competition on the Merits in the "Browser" Market.

Leaving aside the "separate products" issue, the legality of Microsoft's product design under Section 1 "depends on its competitive consequences, not whether it can be labeled 'ty-

ing.'" *Jefferson Parish*, 466 U.S. at 21 n.34. If the "competitive consequences" are not those to which the tying prohibition is addressed, "then it should not be condemned irrespective of its label." *Id*. The rule against tying condemns arrangements that "foreclose[] competition on the merits in a product market distinct from the market for the tying item." *Id*. at 21; *see also Grappone, Inc.* v. *Subaru of New England, Inc.*, 858 F.2d 792, 796 (1st Cir. 1988) (Breyer, J.). Thus, ties are unlawful only if they "deny competitors free access to the market for the tied product" and force buyers "to forego their free choice between competing products." *N. Pac. Ry.*, 356 U.S. at 6. Microsoft's design of Windows did not foreclose "free access" to or "free choice" of competing Web browsing software for three related reasons. J.A. 4469-72.

No Forced Purchase of a Second Product. Because IE is included in Windows at no additional charge, Microsoft has not forced anyone to *purchase* (*i.e.*, pay for) a separate tied product. The Supreme Court long ago stated that the "common core" of unlawful tying arrangements "is the forced *purchase* of a second distinct commodity." *Times-Picayune Publ'g Co.* v. *United States*, 345 U.S. 594, 614 (1953) (emphasis added). Courts thus have held that there can be no antitrust violation if the defendant gives away the allegedly tied product. *E.g.*, *Multistate Legal Studies, Inc.* v. *Harcourt Brace Jovanovich Legal & Prof'l Publ'ns, Inc.*, 63 F.3d 1540, 1548 (10th Cir. 1995), *cert. denied*, 516 U.S. 1044 (1996); *Directory Sales Mgmt. Corp.* v. *Ohio Bell Tel. Co.*, 833 F.2d 606, 609-10 (6th Cir. 1987); *cf. Jefferson Parish*, 466 U.S. at 22 ("anesthesiological services are billed separately from the hospital services petitioners provide"); *see also* J.A. 9708-09.

The district court found that Microsoft included IE in Windows "at no additional charge." 84 F. Supp. 2d at 44 (FF 136). Because IE is free, there is no financial disincentive for consumers to obtain competing Web browsing software as well. As two commentators observed,

"consumers are not inhibited by having paid for IE from choosing multiple browsers." William H. Page & John E. Lopatka, *The Dubious Search for "Integration" in the Microsoft Trial*, 31 CONN. L. REV. 1251, 1270 (1999).

Netscape began offering Navigator free in January 1998. 84 F. Supp. 2d at 47, 110-11 (FF 145, 408). Rather than charge for it, Netscape used Navigator to induce customers to purchase Web servers and to direct traffic to its highly profitable Netcenter Web site. J.A. 4333, 4335-37; J.A. 3755-56; J.A. 4872-73. As a practical matter, Navigator has always been available free to consumers on the Internet. J.A. 4330-31; J.A. 3755; J.A. 4772-73. As a result, a consumer who obtained Windows could use its built-in Web browsing software, IE, to download a free copy of Navigator. J.A. 4856-57; J.A. 7543. In other words, the alleged tied product actually *facilitates* distribution of competing products. That makes this case very different from *Jefferson Parish*:

> The inclusion of IE in Windows does not force users to adopt IE as their browser in the same sense that the hospital in *Jefferson Parish* forced surgical patients to use a particular anesthesiologist. A surgical patient can only be anesthetized by a single anesthesiologist. In contrast a purchaser of a Windows 98 computer who thereby acquires IE 4 remains free to install Netscape Navigator, and indeed, OEMs are free to install it. The government itself concedes that a user often will use two or more browsers depending upon their particular needs.

Page & Lopatka, 31 CONN. L. REV. at 1270.

No Incompatibilities. There is no claim that Microsoft designed Windows to be incompatible with Navigator. To the contrary, Netscape's Barksdale testified that Navigator is "perfectly interoperable" with Windows. J.A. 5061-62; *see also* J.A. 12736-37. In fact, IE provides system services on which Navigator and Web browser "shells" like Encompass, Surf Monkey and NeoPlanet rely. J.A. 3335-35; J.A. 3499. As a result, this case follows *a fortiori* from the *IBM* cases of the 1970s in which peripheral manufacturers unsuccessfully challenged IBM's interface design changes that rendered IBM's mainframe computers incompatible with their

products. *E.g.*, *In re IBM Peripheral EDP Devices Antitrust Litig.*, 481 F. Supp. 965, 1002-08 (N.D. Cal. 1979) [hereinafter *Transamerica*], *aff'd sub nom. Transamerica Computer Co.* v. *IBM*, 698 F.2d 1377 (9th Cir.), *cert. denied*, 464 U.S. 955 (1983); *ILC Peripherals*, 448 F. Supp. at 233-34; *Telex*, 367 F. Supp. at 346-47. Because Navigator runs well on Windows, the alleged tie did not prevent users from choosing to use Navigator instead of, or in addition to, IE. *See Digital Equip. Corp.* v. *Uniq Digital Techs., Inc.*, 73 F.3d 756, 761 (7th Cir. 1996). In fact, Navigator's installed base increased from 15 million to 33 million between 1996 and 1998, as millions of people substituted Navigator for IE as their primary Web browsing software. 84 F. Supp. 2d at 103 (FF 378); 87 F. Supp. 2d at 53.

Despite Barksdale's testimony that Navigator is "perfectly interoperable" with Windows, the district court stated that "Windows 98 override[s] the user's choice of default browser in certain circumstances." 84 F. Supp. 2d at 52 (FF 171). As plaintiffs' expert Weadock admitted, however, of the nearly 30 means of accessing the Internet from Windows 98, only a few do not automatically invoke Navigator if it is configured as the default Web browser, J.A. 5937-38; *see also* J.A. 3023; J.A. 6920-21, and there are valid technical reasons in each instance. The Windows 98 Help system and Windows Update feature depend on ActiveX controls not supported by Navigator, J.A. 5934-35, and the now-discontinued Channel Bar utilized Microsoft's Channel Definition Format, which Navigator also did not support, J.A. 5936-37. Lastly, Windows 98 does not invoke Navigator if a user accesses the Internet through "My Computer" or "Windows Explorer" because doing so would defeat one of the purposes of those features—enabling users to move seamlessly from local storage devices to the Web *in the same browsing window*. J.A. 3326-27 & J.A. 3412-20. Weadock conceded that none of the

organizations he surveyed (nearly all of which used Navigator) complained that Windows 98 invokes IE instead of Navigator in those isolated circumstances. J.A. 5938.

No Distribution Foreclosure. There is no finding that the inclusion of IE in Windows prevented Netscape from getting Navigator into the hands of consumers. *See Roy B. Taylor Sales, Inc.* v. *Hollymatic Corp.*, 28 F.3d 1379, 1383 (5th Cir. 1994) ("Where, however, only dealers are subject to a tie, competitors do not lose a segment of the tied market if there are genuine available paths to consumers") (footnote omitted). To the contrary, the district court concluded that Microsoft did not "deprive Netscape of the ability to have access to *every PC user worldwide* to offer an opportunity to install Navigator." 87 F. Supp. 2d at 53 (emphasis added). Given Netscape's ability to distribute vast quantities of Navigator—160 million copies in 1998 alone, *id*.—the alleged tie resulted in no injury to competition.

II.

Microsoft Did Not Maintain a Monopoly Through Anticompetitive Conduct.

The district court held that Microsoft maintained a monopoly in "Intel-compatible PC operating systems" in violation of Section 2. 87 F. Supp. 2d at 35-44. That offense has two elements: "(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *United States* v. *Grinnell Corp.*, 384 U.S. 563, 570-71 (1966). Because "[i]t is sometimes difficult to distinguish robust competition from conduct with long-term anticompetitive effects," *Spectrum Sports, Inc.* v. *McQuillan*, 506 U.S. 447, 458-59 (1993), Section 2 "must be used with the greatest caution," *Ball Mem'l Hosp., Inc.* v. *Mut. Hosp. Ins., Inc.*, 784 F.2d 1325, 1338 (7th Cir. 1986).

Plaintiffs' monopoly maintenance claim fails for three independently sufficient reasons: (i) Microsoft does not possess monopoly power; (ii) Microsoft did not engage in "anticompe-

titive" conduct within the meaning of Section 2; and (iii) the conduct held to be anticompetitive did not contribute significantly to the maintenance of a monopoly.

A. Microsoft Does Not Possess "Monopoly Power" in a Properly Defined Product Market.

"Monopoly power is the power to control prices or exclude competition." *United States* v. *E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 391 (1956). Microsoft does not possess such power in any relevant antitrust market.

1. The Relevant Product Market Is Not Restricted to "Intel-Compatible PC Operating Systems."

The district court concluded that the relevant product market is limited to "Intel-compatible PC operating systems." 87 F. Supp. 2d at 36. That "market" is far too narrow because it excludes the most serious competitive threats faced by Microsoft's operating systems, including the very competitive threats that gave rise to this action. Indeed, the district court's market definition is so narrow that it excludes Apple's Mac OS, which has competed with Windows for years, simply because the Mac OS runs on a different microprocessor.

There are two methods of assessing monopoly power: (i) the structural approach, which analyzes the respective shares of firms within a notional "market," and (ii) the behavioral approach, which examines the defendant's pricing, output and rate of innovation. J.A. 4282. By adhering rigidly to the structural approach and failing to take into account the dynamism of the software industry, the district court elevated form over substance, excluding from consideration competitive forces that actively constrain Microsoft's conduct. As a result, the district court's narrow market definition obscures, rather than illuminates, the underlying competitive reality of the software business.

The behavioral approach is particularly appropriate here given the "dynamic, vigorous competition" in the industry. 84 F. Supp. 2d at 25 (FF 59). Because software is highly malleable,

"market" boundaries are inherently blurry and fluid, and consumer demand for various functionality can be satisfied in different ways. J.A. 4283-84. Many software products, including operating systems, have absorbed other products over time as the underlying microprocessor became more powerful, and each software category leader is threatened from many different directions—from new entrants, from existing niche players that improve their products and from technological advances that render entire categories obsolete or much less important. J.A. 4283-84. The district court found that "[w]hat eventually displaces the leader is often not competition from another product within the same software category, but rather a technological advance that renders the boundaries defining the category obsolete." 84 F. Supp. 2d at 25-26 (FF 59). Notwithstanding this finding, the district court analyzed competition in static terms, focusing on the narrowest possible definition of the putative market. *E.g.*, *id.* at 26 (FF 60).

a. The District Court's Market Definition Excludes the Most Serious Competitive Threats to Windows.

The district court's narrow market definition excludes the very technologies that it found to be the most serious competitive threats to Windows and the targets of the alleged anticompetitive conduct in this case: Navigator and Java. 84 F. Supp. 2d at 28-30 (FF 68-78). "Operating systems are not the only software programs that expose APIs to application developers. Netscape's Web browser and Sun Microsystems, Inc.'s Java class libraries are examples of non-operating system software that do likewise." *Id.* at 17 (FF 28). In exposing APIs, such middleware can serve as a platform for applications, supplying functionality otherwise provided by Windows. J.A. 3728-29. To the extent applications rely on middleware to obtain needed functionality, the underlying operating system becomes less valuable. 84 F. Supp. 2d at 17-18 (FF 29). Over time, middleware could extend "downward" to the hardware, assuming more and more operating system functions and thereby rendering the operating system unnecessary.

J.A. 3729. Indeed, Netscape's Andreessen was widely reported as having boasted that Navigator would reduce Windows to "a mundane collection of not entirely debugged device drivers." *See* J.A. 3737; J.A. 9898.

To be sure, middleware currently will not "function on a computer without an operating system to perform such tasks as managing hardware resources and controlling peripheral devices." 84 F. Supp. 2d at 17 (FF 29). The primary value of Windows lies, however, in serving as a platform for applications, not in performing low-level tasks such as controlling peripheral devices. *See id*. at 19-20 (FF 37); J.A. 10670 ("The value of the operating system is in its capability to run application software."); *see also* J.A. 4258-59; J.A. 3730-31. It is not "a proper interpretation of the Sherman Act to require that products be fungible to be considered in the relevant market." *du Pont*, 351 U.S. at 394; *accord AD/SAT* v. *Associated Press*, 181 F.3d 216, 227 (2d Cir. 1999) ("[P]roducts or services need not be identical to be part of the same market."). "For antitrust purposes, defining the product market involves identification of the field of competition: the group or groups of sellers or producers who have actual or potential ability to deprive each other of significant levels of business." *Thurman Indus., Inc.* v. *Pay'N Pak Stores, Inc.*, 875 F.2d 1369, 1374 (9th Cir. 1989). This field of competition "will vary with the part of commerce under consideration." *du Pont*, 351 U.S. at 404.

Middleware has the potential ability to deprive Windows of its principal value by supplanting Windows as a popular platform for applications. Indeed, one of the principal bases for plaintiffs' proposed breakup of Microsoft was their assertion that Microsoft Office, a suite of business productivity applications, might develop into a middleware layer that would compete with Windows if the two products were owned by different companies. J.A. 2685-88. Given the

significance of such platform competition, the relevant product market here should encompass all platforms for developing and running applications.

b. The District Court's Market Definition Excludes Other Potential Substitutes for Windows.

In defining a relevant product market, courts look to both demand-side and supply-side substitutability. *Rothery Storage & Van Co.* v. *Atlas Van Lines, Inc.*, 792 F.2d 210, 218 (D.C. Cir. 1986), *cert. denied*, 479 U.S. 1033 (1987).

On the demand side, consumers seeking computing solutions have an increasing array of alternatives, including an Apple Macintosh running the Mac OS or a workstation running a UNIX variant. J.A. 3718-26. As plaintiffs' expert Weadock admitted, "the line between most different types of computer systems, [mini]computers, mainframes and so forth, many of those lines have become blurred over the years." J.A. 5856. The district court further recognized that consumers who use their computers primarily "for storing addresses and schedules, for sending and receiving E-mail, for browsing the Web, and for playing video games" can increasingly choose an "information appliance" such as a handheld computer, television set-top box or game console. 84 F. Supp. 2d at 15-16 (FF 23); *see also* J.A. 4268-71; J.A. 3742-47; J.A. 13517. And, "[a]s the bandwidth available to the average user increases, 'portal' Web sites . . . could begin to host full lines of the server-based, personal-productivity applications," enabling "increasing numbers of computer users equipped with Web browsers . . . to conduct a significant portion of their computing through these portals" without regard to their underlying operating system. 84 F. Supp. 2d at 17 (FF 27).

On the supply side, firms that do not currently produce PC operating systems could develop platform software to compete with Windows. *Id.* at 18 (FF 30). For example, developers of mainframe, server and embedded operating systems have the ability to develop platforms for a

variety of hardware and to meet the entire demand for such software. J.A. 4269-70; J.A. 3720-21. Platform competition also can arise from unexpected sources, as the rapid emergence of Navigator, Linux and the Palm OS demonstrates. J.A. 4268-71; J.A. 3721-22, 3730-39. "[O]nce a firm ha[s] written the necessary software code, it could produce millions of copies of its [platform] at relatively low cost." 84 F. Supp. 2d at 18 (FF 30). Although some companies currently may not find it attractive to develop platform software for PCs given the strong demand for Windows, their ability to do so and to meet 100% of demand exerts strong competitive pressure on Microsoft. J.A. 4273-81. "[W]hen a producer deters competitors by supplying a better product at a lower price, when he eschews monopoly profits, when he operates his business so as to meet consumer demand and increase consumer satisfaction, the goals of competition are served, even if no actual competitors see fit to enter the market at a particular time." *United States* v. *Syufy Enters.*, 903 F.2d 659, 668 (9th Cir. 1990).

2. Microsoft Cannot Control Prices or Exclude Competition.

Microsoft behaves nothing like a monopolist, constantly improving Windows and pricing it attractively. J.A. 4154-55. There is no danger of Microsoft's "becoming slothful, routinized, sleepy, or wanting in alertness, initiative, and progressiveness, as a result of the quiet life sought and usually achieved by a monopolist." *United States* v. *Grinnell Corp.*, 236 F. Supp. 244, 258 (D.R.I. 1964), *aff'd*, 384 U.S. 563 (1966); *see also Standard Oil Co.* v. *United States*, 221 U.S. 1, 52 (1911). Given the competitive nature of the software industry, the district court's holding that Microsoft has monopoly power is contrary to commercial reality. *See United States* v. *Eastman Kodak Co.*, 853 F. Supp. 1454, 1472 (W.D.N.Y. 1994).

a. Microsoft Does Not Behave Like a Monopolist.

Microsoft devoted over $2 billion to research and development in 1998, more than any of its competitors. J.A. 3698-99. Whereas Microsoft devotes approximately 17% of its revenues to

R&D, Intel, Oracle and Sun devote about 10% and IBM devotes only 6%. J.A. 3698. The district court opined, however, that "[t]he fact that Microsoft invests heavily in research and development does not evidence a lack of monopoly power." 84 F. Supp. 2d at 26 (FF 61). In explaining why "Microsoft has incentives to innovate aggressively" despite its purported monopoly power, the district court stated that "if there are innovations that will make Intel-compatible systems attractive to more consumers, . . . the innovations will translate into increased profits for Microsoft." *Id*. The district court also added that Microsoft may be able to stave off potential competitors "by continuing to innovate aggressively" and "improving its own products to the greater satisfaction of consumers." *Id*. Those findings reflect a fundamental misunderstanding of the antitrust laws—far from evidencing monopoly power, they reaffirm the existence of a competitive marketplace. "If a dominant supplier acts consistent with a competitive market—out of fear perhaps that potential competitors are ready and able to step in—the purpose of the antitrust laws is amply served." *Syufy Enters.*, 903 F.2d at 668-69.

Although Microsoft's entire business model is premised on keeping the price of Windows low in order to promote its widespread use and thereby increase its appeal to ISVs, J.A. 3690-91, the district court found that Microsoft's pricing behavior "is consistent with the proposition that the firm enjoys monopoly power," 84 F. Supp. 2d at 26 (FF 62). But that finding cannot be squared with the district court's own acknowledgement that it is impossible "with the available data" to determine whether Microsoft charges a monopoly price for Windows 98. *Id*. at 27 (FF 65). In fact, the district court conceded that "Microsoft could be charging what seems like a low short-term price in order to maximize its profits in the future," *id*., and plaintiffs' economist, Fisher, testified that "[s]ince the middle '90s at least," Microsoft has never "charg[ed] the short-term profit-maximizing monopoly price" for Windows, J.A. 8837. If Microsoft possessed a

durable PC operating system monopoly protected by an insurmountable barrier to entry—as the district court found—Microsoft would charge the short-term profit-maximizing price for Windows.

Microsoft's economist, Schmalensee, testified that "a firm with monopoly power over the operating system would charge at least 16 times—over $900—what Microsoft charges." J.A. 4274, 16179; *see also* J.A. 4274-75, 4550-55, 16455-60; J.A. 11816, 16676. The best that plaintiffs' economist, Fisher, could do in response was to calculate a monopoly price that was "within a couple hundred dollars" of the actual price of Windows, which is about $65 to OEMs. J.A. 8816, 8838. Even the district court recognized that the price of Windows "accounts for only a very small percentage of the price of an Intel-compatible PC system," 84 F. Supp. 2d at 15 (FF 19), and that it is *lower* than the price of competing operating systems, *id*. at 15, 22 (FF 21, 46); *see also* J.A. 4006; J.A. 6616-17; J.A. 7416.

The district court noted that Microsoft has some control over the price of Windows, 84 F. Supp. 2d at 26-27 (FF 62-63), an observation that applies to anyone selling anything other than a true commodity. The district court also asserted that a Microsoft "study" reveals that Microsoft "could have charged $49 for an upgrade to Windows 98—and there is no reason to believe that the $49 price would have been unprofitable—but the study identifies $89 as the revenue-maximizing price." *Id*. at 27 (FF 63). The fact that Microsoft considered demand elasticity for the Windows 98 retail *upgrade* product at prices between $49 and $129, J.A. 10325, and concluded that an "$89 price point yields 21% more retail revenue, compared to [a] $69 price-point," J.A. 10327, is unremarkable and hardly evidence of monopoly power. Because "marginal costs are very low," all software companies have substantial discretion in setting the price of

their products, 84 F. Supp. 2d at 20 (FF 38), and they generally attempt to price their products to maximize their long-term revenue, J.A. 7357-58.

Lastly, the district court found that OEMs "pay particularly close attention to consumer demand" and that they believe that there is "no commercially viable alternative" to Windows based on that demand. 84 F. Supp. 2d at 24 (FF 54). As Compaq's John Rose explained, however, OEMs would preinstall other operating systems on their computers *if they perceived consumer demand for them*. J.A. 4005-06; J.A. 8546-47. For example, several leading OEMs such as Dell, Gateway, Hitachi, IBM and Toshiba have begun preinstalling Linux on some computers. J.A. 3725; J.A. 12570; J.A. 12590; J.A. 12596; J.A. 12638. More importantly, producers of rival operating systems, although niche players now, could quickly expand their output to satisfy the entire demand for operating systems among OEMs *if* Microsoft were to stop innovating or begin charging a supracompetitive price for Windows. *See Tops Mkts., Inc.* v. *Quality Mkts., Inc.*, 142 F.3d 90, 99 (2d Cir. 1998); *Ball Mem'l Hosp.*, 784 F.2d at 1335-36. Even apart from such competition, because software never wears out, Microsoft must continue to improve Windows by, among other things, adding new features to it and price the operating system attractively to give its existing users an incentive to obtain a new version of Windows. J.A. 4224, 4284, 4293-94; J.A. 3687.

b. Market Share Is Not Determinative of Monopoly Power.

Although the district court stressed that Microsoft's share of the market for "Intel-compatible PC operating systems" exceeds 95%, 87 F. Supp. 2d at 36, "[b]lind reliance upon market share, divorced from commercial reality, [can] give a misleading picture of a firm's actual ability to control prices or exclude competition," *Wesson Foods, Inc.* v. *Ragu Foods, Inc.*, 627 F.2d 919, 924 (9th Cir. 1980), *cert. denied*, 450 U.S. 921 (1981). As one court explained, "[m]arket share

reflects current sales, but today's sales do not always indicate power over sales and price tomorrow." *Ball Mem'l Hosp.*, 784 F.2d at 1336.

Courts thus have held that defendants with high market shares lack monopoly power if other evidence shows that they are in fact unable to control prices. *E.g.*, *Tops Mkts.*, 142 F.3d at 98-99 (no monopoly power despite 72% share); *Los Angeles Land Co.* v. *Brunswick Corp.*, 6 F.3d 1422, 1425-29 (9th Cir. 1993) (no monopoly power despite 100% share), *cert. denied*, 510 U.S. 1197 (1994); *Syufy Enters.*, 903 F.2d at 662-73 (no monopoly power despite 75% share).

Monopoly power "comes from the ability to cut back the market's total output and so raise price; consumers bid more in competing against one another to obtain the smaller quantity available." *Ball Mem'l Hosp.*, 784 F.2d at 1335. "When a firm (or group of firms) controls a significant percentage of the productive assets in the market, the remaining firms may not have the capacity to increase their sales quickly enough to make up for the reduction by the dominant firm or group of firms." *Id.* Accordingly, market share indicates monopoly power "only when sales reflect control of the productive assets [*i.e.*, capacity to supply] in the business." *Ind. Grocery, Inc.* v. *Super Valu Stores, Inc.*, 864 F.2d 1409, 1414 (7th Cir. 1989). "If a firm's share of market sales does not reflect control of a significant percentage of the market's productive assets, it does not indicate [monopoly] power." *Id.*

There is no finding—nor could there be—that Microsoft controls a significant percentage of the productive assets in the operating system business, and thus no finding that Microsoft could restrict total output of operating systems and thereby raise prices. Without acquiring new productive assets, existing competitors such as IBM or the producers of Linux or BeOS could expand their "output" to meet the entire consumer demand for operating systems—it is simply a matter of signing new license agreements. *Cf. Ball Mem'l Hosp.*, 784 F.2d at 1335 ("[I]f current

sales are not based on ownership of productive assets—so that entrants do not need to build new plants or otherwise take a long time to supply consumers' wants—the existing firms may have no power at all to cut back the market's output."). In other words, the market position of Windows was created by, and is dependent on, consumer demand, not Microsoft's control of total output. The district court, however, was "blinded by market share figures and ignore[d] marketplace realities." *Tops Mkts.*, 142 F.3d at 99.

c. There Are No Significant Barriers to Entry.

To establish monopoly power, a plaintiff must show that there are significant barriers to entry into the putative market. *United States* v. *Baker Hughes Inc.*, 908 F.2d 981, 987 (D.C. Cir. 1990). The district court found that Microsoft's position is protected by a single barrier to entry—the "applications barrier to entry." 87 F. Supp. 2d at 36. According to the district court, even if a rival operating system "attracted several thousand compatible applications," as OS/2 and the Mac OS have done, "it would still look like a gamble from the consumer's perspective next to Windows, which supports over 70,000 applications." 84 F. Supp. 2d at 20 (FF 40). Describing this alleged barrier to entry as a "cycle of consumer preferences and developer incentives," *id.* at 23 (FF 50), the district court incorrectly labeled Microsoft's success in developing innovative platform software and "evangelizing" that platform software to ISVs as a barrier to entry. At bottom, this supposed entry barrier is nothing more than consumer demand for a platform that supports popular applications.

There are no structural barriers to entry into the platform business as there are in other industries:

> entry is [not] limited by government regulation or licensing requirements. Nor is this the type of industry, like heavy manufacturing or mining, which requires onerous front-end investments that might deter competition from all but the hardiest and most financially secure investors. Nor do we have here a business depend-

> ent on a scarce commodity, control over which might give the incumbent a substantial structural advantage.

Syufy Enters., 903 F.2d at 666-67 (footnote and citation omitted); *see* J.A. 4212-23. Unlike the steel industry, "in which a firm must take years to build a costly plant before having anything to sell," *Ball Mem'l Hosp.*, 784 F.2d at 1335, "the entry barriers faced by an entrepreneur with a software package to sell are truly insignificant," *Transamerica*, 481 F. Supp. at 978. As Oblix's Gordon Eubanks testified, "there is no barrier to being an entrepreneur in the software business. You can go out and write code and create a solution. The [Internet] has made this even easier to do . . . ." J.A. 9415. The ease of entry into the platform business is illustrated by Linux, which was created by a Finnish graduate student in his spare time and now represents a significant challenger to Windows, and by Netscape itself, which began in 1994 as a six-person startup and within a year was viewed as a serious platform threat to Windows. J.A. 2864-66; J.A. 4259-61; J.A. 3682-84, 3721-26.

The need to generate consumer demand for a platform by persuading ISVs to write applications—the sole barrier to entry here according to the district court—is not a cost disproportionately borne by new entrants. *See Los Angeles Land*, 6 F.3d at 1428 ("The disadvantage of new entrants as compared to incumbents is the hallmark of an entry barrier."). Rather, it is a fundamental element of competition in the platform business, something that every developer of a successful platform has to do. J.A. 4241-44. In fact, Microsoft continues to invest hundreds of millions of dollars "each year inducing ISVs to write applications for Windows." 84 F. Supp. 2d at 21 (FF 43). Each time Microsoft releases a new version of Windows, "Microsoft must convince ISVs to write applications that take advantage of new APIs, so that existing Windows users will have [an] incentive to buy an upgrade." *Id.* (FF 44). Microsoft thus spends "more on

platform 'evangelization,' even in relative terms, than any other PC operating-system vendor." *Id*. (FF 43).

Contrary to the district court's findings, ISVs freely write applications for platforms other than Windows. J.A. 4244-47; J.A. 8175-76; J.A. 9430-34; J.A. 11814. The district court itself found that (i) the Mac OS supports more than 12,000 applications, (ii) OS/2 at its peak ran approximately 2,500 applications, and (iii) Navigator has been written for more than 15 different operating systems. 84 F. Supp. 2d at 22, 28 (FF 46, 47, 69). Sun recently announced that *more than one million developers* are writing Java programs. J.A. 13521; *see also* J.A. 13524. And, "[f]or an ISV interested in attracting users, there may be an advantage to offering the first and, for a while, only application in its category that runs on a new PC operating system." 84 F. Supp. 2d at 21 (FF 42); *see also* J.A. 4247; J.A. 12467. This potential "first mover" advantage partially explains why so many ISVs are writing Linux applications despite its relatively modest installed base. J.A. 4245; *see also* J.A. 11789; J.A. 12461; J.A. 12470; J.A. 12582; J.A. 12585; J.A. 12589; J.A. 12593; J.A. 12645.

More importantly, ISVs are increasingly developing Web-based applications that can be used by anyone with an operating system that supports basic Internet technologies like HTTP and HTML, which Windows does through its IE components. J.A. 7788-90; J.A. 9396; J.A. 9693-95; J.A. 13519. By facilitating development of such Web-based applications, Microsoft's inclusion of Internet support in Windows actually *lowered* the "applications barrier to entry."

Of course, the sheer number of applications written for a platform alone does not dictate whether it will be commercially successful. J.A. 7730-31. Most users require a relatively limited range of functionality (word processing, spreadsheet, graphics, e-mail and database) that can be

provided by numerous applications written for many different platforms. J.A. 4248; J.A. 3396; J.A. 8547. It defies common sense to suggest, as the district court did, that a platform must support 70,000 applications to be competitive.

The two examples the district court offered as "empirical evidence" of the applications barrier to entry—OS/2 and the Mac OS—are nothing of the sort. 84 F. Supp. 2d at 22 (FF 45-47). IBM released OS/2 in 1987, three years *before* Microsoft released Windows 3.0, the first version of Windows to achieve widespread ISV support. J.A. 3398. Many factors unrelated to the number of applications written for Windows contributed to the limited appeal of OS/2, including IBM's marketing and design decisions. J.A. 3397-3402; J.A. 6301-02, 6309-10, 6322-24, 6336. In fact, because IBM had a Windows 3.0 source code license from Microsoft, IBM was able to design OS/2 so that all 16-bit Windows applications could run unmodified on OS/2, thus eliminating any "applications barrier to entry." J.A. 3400-01.

As for the Mac OS, the district court found that it supports more than 12,000 applications, 84 F. Supp. 2d at 22 (FF 47)—far more than any user could ever want or need—and a great many new Macintosh applications have been introduced since Apple released its popular iMac computer in 1998, J.A. 17180-81; J.A. 11732; J.A. 12469. The district court's discussion of the Mac OS also cannot be reconciled with the purported logic of the breakup ordered below. Plaintiffs contended that breaking up Microsoft might increase operating system competition because the resulting "applications company" might create a version of Microsoft Office for Linux. J.A. 9776. Plaintiffs never explained—and the district court never asked—why the availability of this one application might enable Linux to compete more effectively with Windows when Apple's Mac OS, which supports more than 12,000 applications, including a very popular version of Microsoft Office, supposedly cannot.

B. Microsoft Did Not Engage in Anticompetitive Conduct.

"[A] mere showing of monopoly power unaccompanied by evidence of anti-competitive behavior is insufficient to support a claim" under Section 2. *Trace X Chem., Inc.* v. *Canadian Indus., Ltd.*, 738 F.2d 261, 266 (8th Cir. 1984). The principal bases for the district court's monopoly maintenance ruling were Microsoft's inclusion of IE in Windows and its promotion and distribution agreements with ISPs and OLSs, which supposedly foreclosed Navigator from the OEM and IAP channels of distribution. 87 F. Supp. 2d at 39-42. Those alleged instances of anti-competitive conduct come up short under Section 2 for the very same reasons that plaintiffs' tying and exclusive dealing claims fail under Section 1: they were not exclusionary. Even assuming that Navigator was foreclosed from the OEM and IAP channels—which it was not—Microsoft did not violate Section 2 because Netscape was able to distribute Navigator to "every PC user worldwide" through other channels, thereby gaining tens of millions of users. 87 F. Supp. 2d at 53.

Without citing any authority, the district court asserted that allegations of tying and exclusive dealing that are insufficient to satisfy Section 1 may nevertheless satisfy Section 2. *Id.* at 39-42, 53. The Supreme Court has stated, however, that "[c]oncerted activity subject to § 1 is judged *more sternly* than unilateral activity under § 2" because "[c]oncerted activity inherently is fraught with anticompetitive risk." *Copperweld Corp.* v. *Indep. Tube Corp.*, 467 U.S. 752, 768-69 (1984) (emphasis added). In contrast, the Supreme Court has "been careful to avoid constructions of § 2 which might chill competition, rather than foster it." *Spectrum Sports*, 506 U.S. at 458. "Judging unilateral conduct in this manner reduces the risk that the antitrust laws will dampen the competitive zeal of a single aggressive entrepreneur." *Copperweld*, 467 U.S. at 768. None of the conduct challenged in this case was anticompetitive for one simple reason: Microsoft did not prevent Netscape's (or Sun's) platform from competing with Windows in the marketplace.

The term "anticompetitive" has a "special meaning: it refers not to actions that merely injure individual competitors, but rather to actions that harm the competitive process, a process that aims to bring consumers the benefits of lower prices, better products, and more efficient production methods." *Interface Group, Inc.* v. *Mass. Port Auth.*, 816 F.2d 9, 10 (1st Cir. 1987) (Breyer, J.) (citation omitted). Areeda states:

> [A]ggressive but non-predatory pricing, higher output, improved product quality, energetic market penetration, successful research and development, cost-reducing innovations, and the like are welcomed by the Sherman Act. They are therefore not to be considered "exclusionary" for § 2 purposes even though they tend to exclude rivals and may even create a monopoly.

III AREEDA ¶ 651b, at 76; *see also Intergraph Corp.* v. *Intel Corp.*, 195 F.3d 1346, 1354 (Fed. Cir. 1999) ("Product superiority and the ensuing market position, flowing from a company's research, talents, commercial efforts, and financial commitments, do not convert the successful enterprise into an illegal monopolist under the Sherman Act.").

In ruling that Microsoft engaged in anticompetitive conduct, the district court improperly applied a burden-shifting approach. According to the district court, if the evidence reveals a significant "exclusionary" impact—apparently, anything that adversely affects a rival—then "liability will attach" unless "the defendant comes forward with specific, procompetitive business motivations that explain the full extent of its exclusionary conduct." 87 F. Supp. 2d at 37-38. This approach fails to distinguish between anticompetitive conduct that prevents a competitor from reaching the marketplace (thus decreasing consumer welfare) and procompetitive conduct that defeats a competitor in the marketplace through improved products, increased distribution and lower prices (thus increasing consumer welfare). *See Town of Concord* v. *Boston Edison Co.*, 915 F.2d 17, 21-22 (1st Cir. 1990) (Breyer, J.) ("[A] practice is not 'anticompetitive' simply because it harms competitors . . . . Rather, a practice is 'anticompetitive' only if it harms the competitive process."), *cert. denied*, 499 U.S. 931 (1991); *see also Brooke Group, Ltd.* v. *Brown*

& Williamson Tobacco Corp., 509 U.S. 209, 225 (1993). ("Even an act of pure malice by one business competitor against another does not, without more, state a claim under the federal anti-trust laws . . . ."); *Spectrum Sports*, 506 U.S. at 458 ("The law directs itself not against conduct that is competitive, even severely so, but against conduct which unfairly tends to destroy competition itself.").

The district court also erroneously relied on evidence of Microsoft's intent to win business from Netscape in concluding that Microsoft's conduct was anticompetitive. 87 F. Supp. 2d at 37 n.1. Consistent with this focus on intent, the district court placed great weight on the unremarkable proposition that Microsoft sought to maximize IE's share of browser usage at Navigator's expense, a perfectly procompetitive intent. 84 F. Supp. 2d at 43-46, 51, 64, 98, 102-03, 107-08 (FF 133, 136, 139-40, 142, 166, 221, 358, 376, 397); *see also* 87 F. Supp. 2d at 39.

"The subjective intent of a company is difficult to determine and will usually reflect nothing more than a determination to win all possible business from rivals—a determination consistent with competition." FRANKLIN M. FISHER ET AL., FOLDED, SPINDLED, AND MUTILATED: ECONOMIC ANALYSIS AND *U.S.* V. *IBM* 272 (1983). As a result, "[a] desire to increase market share or even drive a competitor out of business is not sufficient" to establish a violation of Section 2. *Abcor Corp.* v. *AM Int'l, Inc.*, 916 F.2d 924, 927 (4th Cir. 1990).[3] In fact, "[t]he intent

[3] *See also Ocean State Physicians Health Plan, Inc.* v. *Blue Cross & Blue Shield*, 883 F.2d 1101, 1113 (1st Cir. 1989) ("[D]esire to crush a competitor, standing alone, is insufficient to make out a violation of the antitrust laws."), *cert. denied*, 494 U.S. 1027 (1990); *A.A. Poultry Farms, Inc.* v. *Rose Acre Farms, Inc.*, 881 F.2d 1396, 1402 (7th Cir. 1989) ("Firms need not like their competitors; they need not cheer them on to success; a desire to extinguish one's rivals is entirely consistent with, often is the motive behind, competition."), *cert. denied*, 494 U.S. 1019 (1990); *Barry Wright Corp.* v. *ITT Grinnell Corp.*, 724 F.2d 227, 232 (1st Cir 1983) (Breyer, J.) ("'[I]ntent to harm' without more offers too vague a standard in a world where executives may think no further than 'Let's get more business,' and long-term effects on consumers depend in large measure on competitors' responses.").

to preserve or expand one's market share is presumptively lawful." *MCI* v. *AT&T*, 708 F.2d 1081, 1113 (7th Cir.), *cert. denied*, 464 U.S. 891 (1983). Moreover, this Court has recognized that an "emphasis on competitive effect, as opposed to intent, comports with recent Supreme Court precedent." *Ass'n for Intercollegiate Athletics for Women* v. *NCAA*, 735 F.2d 577, 582 (D.C. Cir. 1984). Areeda concurs:

> [T]he nature and consequences of a particular practice are the vital consideration, not the purpose or intent. Nature and consequence are almost always established by objective facts about the relevant market and the defendant, quite apart from any manifestation of subjective intent.

III AREEDA ¶ 651a, at 74.

Applying the correct legal standard, Microsoft did not engage in anticompetitive conduct. To the contrary, Microsoft's conduct—improving its platform and broadly distributing those improvements—was procompetitive. It also made perfect business sense: making Windows an Internet-enabled platform helped Microsoft license more copies of the operating system, a product that generates approximately $3 billion in revenue annually. *See* 84 F. Supp. 2d at 45 (FF 140); J.A. 4487-92, 16392-97; J.A. 3748-57.

1. The Inclusion of Internet Technologies in Windows Did Not Violate Section 2.

The district court held that Microsoft's integrated design of Windows violated Section 2. 87 F. Supp. 2d at 39. That conclusion is erroneous for the same reasons that the district court's Section 1 tying analysis is erroneous. *See* J. Gregory Sidak, *Debunking Predatory Innovation*, 83 COLUM. L. REV. 1121, 1146 (1983). The district court cited no authority for its contention that the Section 1 tying standard is inapplicable to identical claims under Section 2. In fact, one of the cases on which this Court relied in fashioning its test, 147 F.3d at 949-50, involved a challenge to a product design under Section 2. *See ILC Peripherals Leasing Corp.* v. *IBM*, 458 F. Supp.

423, 426, 438 (N.D. Cal. 1978), *aff'd sub nom. Memorex Corp.* v. *IBM*, 636 F.2d 1188 (9th Cir. 1980), *cert. denied*, 452 U.S. 972 (1981).

In any event, courts have held that design changes that improve a product cannot violate Section 2—even if they render the product incompatible with competitors' products. *E.g.*, *Foremost Pro Color, Inc.* v. *Eastman Kodak Co.*, 703 F.2d 534, 544-46 (9th Cir. 1983), *cert. denied*, 465 U.S. 1038 (1984); *Calif. Computer Prods., Inc.* v. *IBM*, 613 F.2d 727, 743-45 (9th Cir. 1979); *Transamerica*, 481 F. Supp. at 1002-05; *ILC Peripherals*, 458 F. Supp. at 438-44; *see also* IIIA AREEDA ¶ 781a, at 255 ("[P]roduct superiority is one of the objects of competition and cannot be wrongful, even for a monopolist."). In determining whether a design change resulted in an improvement, judicial review should be "narrow and deferential." *Microsoft*, 147 F.3d at 949-50. "Where there is a difference of opinion as to the advantages of two alternatives which can both be defended from an engineering standpoint, the court [should] not allow itself to be enmeshed 'in a technical inquiry into the justifiability of product innovations.'" *ILC Peripherals*, 458 F. Supp. at 439 (quoting *Response of Carolina*, 537 F.2d at 1330). This Court recognized as much in the Consent Decree Case, noting that judges and juries should not be "'in the unwelcome position of designing computers.'" 147 F.3d at 950 (quoting IX AREEDA ¶ 1700j1, at 15).

As previously noted, this is a much easier case than earlier technological tying cases because the inclusion of IE in Windows did not render the operating system incompatible with competing Web browsing software. In fact, Netscape's Barksdale agreed that Navigator is "perfectly interoperable" with Windows. J.A. 5061-62. Nor can there be any question that Microsoft's inclusion of IE in Windows—which did not foreclose Navigator's access to the marketplace—resulted in improvements to the operating system for users, ISVs and OEMs. *See supra* pp. 29-44. Even the district court recognized that "many—if not most—consumers can be

said to benefit from Microsoft's provision of Web browsing functionality with its Windows operating system at no additional charge." 84 F. Supp. 2d at 55 (FF 186). Lastly, all major operating system vendors provide Web browsing software with their operating systems. *See* J.A. 11798. Acts that are "ordinary business practices" typical of those used by other firms do not constitute anticompetitive conduct in violation of Section 2. *Trace X Chem.*, 738 F.2d at 266.

2. The Challenged Provisions of Microsoft's OEM License Agreements Did Not Violate Section 2.

Microsoft gives OEMs only limited rights under their license agreements to modify Windows because such modifications can destroy the principal value of Windows as a stable and consistent platform that supports a broad range of applications and that is familiar to users. J.A. 3609, 3615-19; J.A. 12575. The district court held that the provisions of Microsoft's license agreements that limit "the freedom of OEMs to reconfigure or modify" Windows violated Section 2 because they prevented OEMs from altering Windows "in ways that might . . . generate usage for Navigator." 87 F. Supp. 2d at 39; *see also* 84 F. Supp. 2d at 61 (FF 213) (describing provisions).

The district court's conclusion is erroneous for two independent reasons. First, in refusing to give its distributors—OEMs—the right to modify its copyrighted operating systems, Microsoft is exercising its rights as the holder of valid copyrights. Because the challenged provisions only restate, and do not enlarge, Microsoft's rights under copyright law, they do not violate the antitrust laws. Second, Microsoft's OEM license agreements do not unduly restrict the opportunities of Netscape to distribute Navigator in any event. "Microsoft's license agreements have never prohibited OEMs from pre-installing programs, including Navigator, on their PCs . . . ." *Id.* at 63 (FF 217).

a. Microsoft's OEM License Agreements Simply Restate Its Rights under Federal Copyright Law.

"Windows 95 and Windows 98 are covered by copyright registrations." 84 F. Supp. 2d at 66 (FF 228). Those certificates of registration "constitute *prima facie* evidence of the validity of the copyright of the software." *Stenograph L.L.C.* v. *Bossard Assocs., Inc.*, 144 F.3d 96, 99 (D.C. Cir. 1998); *see also* 17 U.S.C. § 410(c). As the district court held, "the *validity* of Microsoft's copyrights has never been in doubt." 87 F. Supp. 2d at 40 (emphasis in original).

It is obviously true that "[i]ntellectual property rights do not confer a privilege to violate the antitrust laws." *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322, 1325 (Fed. Cir.), *petition for cert. filed*, 69 U.S.L.W. 3087 (July 11, 2000) (No. 00-62). It is equally true, however, that the antitrust laws do not negate the rights of copyright holders under federal law. *Intergraph*, 195 F.3d at 1362. Microsoft's copyrights give it a bundle of rights, including the right to "refrain from vending or licensing and content [itself] with simply exercising the right to exclude others from using [its intellectual] property." *Fox Film Corp.* v. *Doyal*, 286 U.S. 123, 127 (1932).

Although Microsoft exploits its intellectual property by licensing it to others, Microsoft retains the right to protect against unauthorized modifications to its copyrighted works. *See Gilliam* v. *ABC*, 538 F.2d 14, 21 (2d Cir. 1976) ("[T]he ability of the copyright holder to control his work remains paramount in our copyright law."); *LucasArts Entm't Co.* v. *Humongous Entm't Co.*, 870 F. Supp. 285, 290 (N.D. Cal. 1993); *Corsearch, Inc.* v. *Thomson & Thomson*, 792 F. Supp. 305, 322 (S.D.N.Y. 1992). Microsoft thus could bring an infringement action to prevent an OEM from making unauthorized alterations to its copyrighted operating systems, even in the absence of an express limitation on the scope of the license conveyed by Microsoft. *See S.O.S., Inc.* v. *Payday, Inc.*, 886 F.2d 1081, 1088 (9th Cir. 1989); *Costello Publ'g Co.* v. *Rotelle*, 670 F.2d 1035, 1044-45 & n.16 (D.C. Cir. 1981).

The district court expressed "some doubt" about whether a copyright holder has the right to preserve the integrity of its copyrighted works. 87 F. Supp. 2d at 40. Two leading cases, however, eliminate that doubt. In *Gilliam* v. *ABC*, the Second Circuit directed the district court to issue a preliminary injunction preventing ABC from broadcasting edited versions of three comedy skits written by the British comedy group Monty Python. 538 F.2d at 17, 26. The court stated that "unauthorized editing of the underlying work, if proven, would constitute an infringement of the copyright in that work similar to any other use of a work that exceeded the license granted by the proprietor of the copyright." *Id*. at 21. The court thus concluded that there was a substantial likelihood that "appellants will succeed in proving infringement of their copyright by ABC's broadcast of edited versions of Monty Python programs." *Id*. at 23; *see also* 3 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8D.04[A][1], at 8D-49 (1999).

The Seventh Circuit condemned a similar unauthorized modification of a copyrighted work. *WGN Cont'l Broad. Co.* v. *United Video, Inc.*, 693 F.2d 622, 625 (7th Cir. 1982) (Posner, J.). In connection with its nightly news program, WGN began broadcasting supplemental "teletext" information in the normally unused portion of the television signal known as the vertical blanking interval. *Id*. at 624. WGN held a single copyright for the news programs, including the supplemental teletext information. *Id*. at 625. When one of WGN's cable re-broadcasters, United Video, removed WGN's teletext and substituted teletext from another company, WGN sued for copyright infringement. *Id*. at 624. The court stated that, because WGN's copyright covered both the news program and the supplemental teletext information, a rebroadcaster could not edit the copyrighted work and broadcast only one portion of it. *Id*. at 625 ("[T]he deletion of the teletext from United Video's retransmission was an alteration of a copyrighted work and hence an infringement under familiar principles."); *see also Cmty. for Creative Non-Violence* v. *Reid*, 846

F.2d 1485, 1498-99 (D.C. Cir. 1988), *aff'd*, 490 U.S. 730 (1989); *Nat'l Bank of Commerce* v. *Shaklee Corp.*, 503 F. Supp. 533, 544 (W.D. Tex. 1980).

The copyright laws thus give Microsoft the right to prevent OEMs from shipping modified versions of Windows without Microsoft's permission. That right derives from Microsoft's exclusive rights under the Copyright Act to reproduce its copyrighted works and prepare derivative works. 17 U.S.C. § 106(1) & (2); *see also Weinstein* v. *Univ. of Ill.*, 811 F.2d 1091, 1095 n.3 (7th Cir. 1987); II WILLIAM F. PATRY, COPYRIGHT LAW AND PRACTICE 823, 826 & nn. 24 & 34 (1994). Although the district court acknowledged that "some courts have . . . recognized the right of a copyright holder to preserve the 'integrity'" of copyrighted works, it asserted that those cases are "inapposite" because they were "actions for infringement without antitrust implications." 87 F. Supp. 2d at 40 n.2. In *WGN*, however, Judge Posner expressly considered the interaction between copyright and antitrust laws, stating that although licensing a copyrighted work as a unified whole might sometimes resemble a "tie-in" raising "serious antitrust problems, the echo is too faint to guide our interpretation of the Copyright Act." 693 F.2d at 626.

More significantly, if intellectual property rights have been lawfully acquired—and plaintiffs have never contended otherwise here—their subsequent exercise cannot give rise to antitrust liability. *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d at 1327-28, 1329; *see also United States* v. *Studiengesellschaft Kohle, m.b.H*, 670 F.2d 1122, 1129 (D.C. Cir. 1981); *SCM Corp.* v. *Xerox Corp.*, 645 F.2d 1195, 1206 (2d Cir. 1981), *cert. denied*, 455 U.S. 1016 (1982).[4] Courts

[4] *See also BMI* v. *CBS*, 441 U.S. 1, 19 (1979) ("[W]e would not expect that any market arrangements reasonably necessary to effectuate the rights that are granted [by copyright laws] would be deemed a *per se* violation of the Sherman Act."); *Simpson* v. *United Oil Co. of Cal.*, 377 U.S. 13, 24 (1964) ("The patent laws which give a 17-year monopoly on 'making, using, or selling the invention' are *in pari materia* with the antitrust laws and modify them *pro tanto*."); *United States* v. *Westinghouse Elec. Corp.*, 648 F.2d 642, 647 (9th Cir. 1981) ("[I]n all of the

thus have rejected antitrust claims if a copyright holder did nothing more than exercise its rights under copyright law. *E.g.*, *Montgomery County Ass'n of Realtors, Inc.* v. *Realty Photo Master Corp.*, 878 F. Supp. 804, 816-17 (D. Md. 1995), *aff'd*, 91 F.3d 132 (4th Cir. 1996); *Advanced Computer Servs. of Mich., Inc.* v. *MAI Sys. Corp.*, 845 F. Supp. 356, 368-70 (E.D. Va. 1994); *Cardinal Films, Inc.* v. *Republic Pictures Corp.*, 148 F. Supp. 156, 157-59 (S.D.N.Y. 1957).

The district court stated that "the true impetus behind Microsoft's restrictions on OEMs" was not to preserve the integrity of Windows, but to prevent OEMs from "giv[ing] prominent placement to middleware like Navigator." 87 F. Supp. 2d at 41. The evidence suggests otherwise. Although Microsoft's license agreements have never permitted OEMs to alter Windows, several large OEMs in 1994 and 1995 began modifying the Windows startup sequence to include their own user interfaces that covered up the Windows desktop. J.A. 3615, 3620-22; J.A. 4007; J.A. 11893. To ensure that users see the Windows desktop as designed by Microsoft at least once when they first turn on their new computers, Microsoft changed its OEM license agreements to make it explicit that OEMs are not permitted to alter Windows without Microsoft's permission. J.A. 3620-21; J.A. 12575. More importantly, courts have refused to examine a defendant's subjective motivation in asserting its rights under copyright law "in the absence of any evidence that the copyrights were obtained by unlawful means or were used to gain monopoly power beyond the statutory copyright granted by Congress." *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d at 1329. No such evidence was presented here.

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cases cited by the government, the offending patentee seeks to do more than enjoy the limited monopoly granted by the patent laws."); *LucasArts Entm't*, 870 F. Supp. 2d at 290 ("[A] court must tread gingerly before permitting an antitrust plaintiff to modify the scope of the statutory copyright grant that Congress has seen fit to impose.").

b. Microsoft's OEM License Agreements Did Not Foreclose Netscape's Distribution of Navigator.

The challenged provisions of Microsoft's OEM license agreements also are unobjectionable because they do not unduly restrict Netscape's opportunities to distribute Navigator. Indeed, the district court's conclusion that Netscape was able to distribute Navigator to "every PC user worldwide" belies any finding of foreclosure. 87 F. Supp. 2d at 53.

Because the primary function of Windows is to serve as a platform for applications, Microsoft gives OEMs considerable latitude to modify the initial Windows startup sequence and the Windows desktop to promote non-Microsoft software, including Navigator. J.A. 4377-85; J.A. 4013-14; J.A. 3611-15, 3622-32; J.A. 12063 (Video). The district court found:

> Microsoft's license agreements have never prohibited OEMs from pre-installing programs, including Navigator, on their PCs and placing icons and entries for those programs on the Windows desktop and in the "Start" menu. The icons and entries that Microsoft itself places on the desktop and in the "Start" menu have always left room for OEMs to insert more icons and program entries of their own choosing. In fact, Microsoft leaves enough space for an OEM to add more than forty icons to the Windows desktop.

84 F. Supp. 2d at 63 (FF 217). The district court further acknowledged that Microsoft's license agreements allow OEMs "to set Navigator as the default browsing software." *Id*.

In addition, the challenged provisions apply only to the initial Windows startup sequence, requiring OEMs to allow Windows to "boot up" the *very first time* a new PC is turned on in the manner in which the operating system was designed, developed and tested by Microsoft. J.A. 3609, 3620-26. OEMs thus are "free to place an icon on the desktop that a user could click to invoke an alternate user interface" that "could be configured to load automatically the next time the PC was turned on." 84 F. Supp. 2d at 63 (FF 218). Similarly, Microsoft's OEM license agreements have "never extended to the interval between the time when the PC was turned on and the time when Windows began loading from the hard drive into RAM," thus enabling OEMs

to promote Navigator or other non-Microsoft software before the Windows bootup is initiated. *Id*.; *see also* J.A. 3622-23. And "the Windows 98 license does not prohibit an OEM from including on the keyboard of its PCs a button that takes users directly to an OEM-maintained site containing promotion for Navigator." 84 F. Supp. 2d at 63 (FF 218); *see als*o J.A. 3625.

Despite the freedom of OEMs to install Navigator on their PCs, the district court suggested that OEMs are reluctant to do so because the presence of both a Navigator and IE icon on the Windows desktop would cause customer confusion. 84 F. Supp. 2d at 49-50, 63 (FF 159, 217). But the fact that many leading OEMs preinstall Navigator—as well as the Encompass Web browser "shell"—on their PCs belies this supposition. J.A. 3499; J.A. 4013; J.A. 3613-14; J.A. 8548-49; J.A. 12826-27. Furthermore, plaintiffs' own witnesses, Apple's Tevanian and IBM's Soyring, disavowed the notion that including more than one type of Web browsing software with their PCs—which both Apple and IBM do—results in any customer confusion. J.A. 5493-94; J.A. 6222.

Finally, the district court's finding that "Microsoft has largely succeeded in exiling Navigator from the crucial OEM distribution channel," 84 F. Supp. 2d at 68 (FF 239), cannot be squared with the evidence. As noted above, Microsoft has *never* limited OEMs' ability to preinstall non-Microsoft Web browsing software. J.A. 4013-15; J.A. 3607-08, 3624; J.A. 8729; J.A. 9216-17; J.A. 12737; J.A. 16935-36; J.A. 12854-55; J.A. 13501. In fact, numerous leading OEMs, including Acer, Compaq, Fujitsu, Gateway, Hewlett-Packard, Hitachi, IBM, Packard Bell/NEC and Sony, preinstall Navigator on their PCs. J.A. 3613-14; J.A. 8548-49. The district court's finding also is inconsistent with AOL's conclusion, reached during its due diligence investigation, that Navigator was present on "22% of OEM shipments." J.A. 12642. And the notion that Netscape was excluded from a "crucial" distribution channel is inconsistent with the

district court's conclusion that "Netscape was able to distribute 160 million copies of Navigator" in 1998. 87 F. Supp. 2d at 53.

3. Microsoft's Agreements with IAPs Did Not Violate Section 2.

The district court held that Microsoft's agreements with ISPs and OLSs—collectively referred to as IAPs—did not violate Section 1 because they did not "deprive Netscape of the ability to have access to every PC user worldwide to offer an opportunity to install Navigator." 87 F. Supp. 2d at 53. Nevertheless, Microsoft's agreements with IAPs were one of the two principal bases for the district court's monopoly maintenance ruling. *Id*. at 41-42. Without citing any authority, the district court asserted that "[t]he fact that Microsoft's arrangements with various firms did not foreclose enough of the relevant market to constitute a § 1 violation in no way detracts from the Court's assignment of liability for the same arrangements under § 2." *Id*. at 53.

Contrary to the district court's assertion, courts have applied the same standard to alleged exclusive dealing agreements under both Section 1 *and* Section 2, holding that such agreements are not anticompetitive unless they deny competitors access to a significant percentage of the market. *E.g., Concord Boat Co.* v. *Brunswick Corp.*, 207 F.3d 1039, 1062-63 (8th Cir.), *cert. denied*, 69 U.S.L.W. 3176 (U.S. Nov. 6, 2000) (No. 00-379); *W. Parcel Express* v. *UPS*, 190 F.3d 974, 975-76 & n.1 (9th Cir. 1999); *Barry Wright*, 724 F.2d at 236-38. "After all, an act can be wrongful in the context of section 2 only where it has or threatens to have a significant exclusionary impact." *U.S. Healthcare, Inc.* v. *Healthsource, Inc.*, 986 F.2d 589, 597-98 (1st Cir. 1993). The district court has already found that Netscape was able to distribute Navigator to "every PC user worldwide" despite Microsoft's IAPs agreements. 87 F. Supp. 2d at 53. Accordingly, those agreements cannot be said to have had a significant exclusionary impact: they did not deny Netscape access to a significant percentage—indeed, any percentage—of the alleged

market. *See Omega Envtl., Inc.* v. *Gilbarco, Inc.*, 127 F.3d 1157, 1163 (9th Cir. 1997), *cert. denied*, 525 U.S. 812 (1998).

In addition, the district court's finding that Microsoft "successfully ostracized Navigator" from the IAP channel is contrary to the evidence. 87 F. Supp. 2d at 42. AOL's due diligence revealed that Navigator accounted for a "24% share of top 20 ISP's distributions" and was the "[d]efault browser on all RBOC and Earthlink distributions." J.A. 12642. The evidence also shows that several large ISPs collectively shipped millions of copies of Navigator while they were included in the Windows 95 referral server. J.A. 3887-88, 3890-91, 3915-20; J.A. 12442; J.A. 12460; J.A. 16975. And AOL is again free in early 2001—as it was at the end of 1998—to replace IE with Navigator in AOL's proprietary client software, which would again make Navigator the leading Web browsing software. J.A. 3457, 3463-64; J.A. 8444-58.

Furthermore, Microsoft's IAP agreements—entered into at a time when IE badly trailed Navigator in terms of usage share—were not anticompetitive. The district court noted that "Microsoft licensed Internet Explorer and the [IEAK] to hundreds of IAPs for no charge," stating that "Microsoft paid for the fealty of IAPs with large investments in software development for their benefit." 87 F. Supp. 2d at 41, 42. Such conduct was procompetitive, not anticompetitive, because it ensured widespread availability of IE and provided useful technology to IAPs without excluding Navigator from the marketplace. J.A. 3901-06. The district court also stated: "Microsoft extended valuable promotional treatment to the ten most important IAPs in exchange for their commitment to promote and distribute Internet Explorer and to exile Navigator from the desktop." 87 F. Supp. 2d at 41. Microsoft's cross-promotional agreements with IAPs were short term and non-exclusive, J.A. 3910-26; J.A. 3464-66; *see also* J.A. 3453-57, and they did not

"exile" Navigator from the desktop: Netscape was free to, and did, enter into agreements with OEMs to include a Navigator icon on the Windows desktop. J.A. 3613-14.

Finally, Netscape was free to, and did, compete with Microsoft to convince IAPs to distribute Navigator. J.A. 3436-53; *see also* J.A. 16772. For example, AOL wanted to select only one Web browsing software to integrate into its proprietary client software. 84 F. Supp. 2d at 82 (FF 293). The fact that Microsoft persuaded AOL to use IE in lieu of Navigator is simply competition at work. As the Seventh Circuit explained:

> Competition-for-the-contract is a form of competition that antitrust laws protect rather than proscribe, and it is common. Every year or two, General Motors, Ford, and Chrysler invite tire manufacturers to bid for exclusive rights to have their tires used in the manufacturers' cars. Exclusive contracts make the market hard to enter in mid-year but cannot stifle competition over the longer run, and competition of this kind drives down the price of tires, to the ultimate benefit of consumers.

Paddock Publ'ns, Inc. v. *Chicago Tribune Co.*, 103 F.3d 42, 45 (7th Cir. 1996), *cert. denied*, 520 U.S. 1265 (1997). "It is a harsh reality that when competition occurs, some win and some lose." *Seagood Trading Corp*. v. *Jerrico, Inc.*, 924 F.2d 1555, 1573 (11th Cir. 1991).

4. Microsoft's Development and Marketing of Its Own Java Implementation Did Not Violate Section 2.

The district court condemned Microsoft's development and marketing of its own Java implementation, concluding that Microsoft took steps "to maximize the difficulty with which applications written in Java could be ported from Windows to other platforms, and *vice versa*." 87 F. Supp. 2d at 43. Contrary to the district court's conclusion, Microsoft's conduct with regard to Java was procompetitive, not anticompetitive. Microsoft developed a high-quality JVM that permitted cross-platform programs written in "pure Java" to run faster and with fewer errors on Windows than on any other platform. J.A. 3809, 3826-27, 3831; J.A. 10773. Microsoft also created Java development tools that enable ISVs to write either cross-platform Java programs or

Java programs that take advantage of unique features and functionality of Windows. J.A. 3827-29. By giving ISVs the choice of writing either cross-platform Java programs or Java programs designed specifically for use with Windows, Microsoft's Java implementation is by definition procompetitive. *See NCAA* v. *Bd. of Regents of Univ. of Okla.*, 468 U.S. 85, 102 (1984).

5. Microsoft's Conduct Taken as a Whole Did Not Violate Section 2.

The district court found that Microsoft's agreements with Apple and various ICPs and ISVs, while not anticompetitive in and of themselves, "supplemented Microsoft's efforts in the OEM and IAP channels." 87 F. Supp. 2d at 43. The district court also stated that Microsoft attempted (albeit unsuccessfully) to persuade Intel, Apple, RealNetworks and IBM "to desist from certain technological innovations and business initiatives." *Id*. at 39. According to the district court, although not all of the challenged acts "on their own independently satisfy the second element of a § 2 monopoly maintenance claim," viewing "Microsoft's conduct as a whole . . . reinforces the conviction that it was predacious." *Id*. at 44.

In holding that conduct not itself anticompetitive can become unlawful when viewed with other conduct, the district court mistakenly relied on the statement in *Continental Ore Co.* v. *Union Carbide & Carbon Corp.*, 370 U.S. 690, 699 (1962), that "plaintiffs should be given the full benefit of their proof without tightly compartmentalizing the various factual components and wiping the slate clean after scrutiny of each." The acts at issue in *Continental Ore*, unlike those here, were alleged to be part of a *conspiracy* to monopolize among multiple firms. *Id*. at 699 ("[T]he character and effect of a conspiracy are not to be judged by dismembering it and viewing its separate parts, but only by looking at it as a whole.") (internal quotation omitted). As one court stated, "The 'compartmentalizing' condemned by the Supreme Court consisted of a seria-tim examination of the claims against each of five conspiracy defendants as if they were separate

lawsuits, thereby overlooking the conspiracy claim itself." *In re Fine Paper Antitrust Litig.*, 685 F.2d 810, 822 (3d Cir. 1982).

Hence, "nothing in *Continental Ore* requires a conclusion that a defendant that has not engaged in an unlawful conspiracy, and has committed *no* acts in themselves violative of the Sherman Act, could be found guilty of antitrust violations on some theory that the acts have 'synergistic effects' that convert lawful conduct into violations of law." *S. Pac. Communications Co.* v. *AT&T*, 556 F. Supp. 825, 888 (D.D.C. 1982) (emphasis in original), *aff'd*, 740 F.2d 980 (D.C. Cir. 1984), *cert. denied*, 470 U.S. 1005 (1985). Instead, "once a claim is found to be without merit, such a claim cannot be used as a basis for finding other claims to constitute a violation of the antitrust laws." *Id.* at 888 n.69. Courts thus have "reject[ed] the notion that if there is a fraction of validity to each of the basic claims and the sum of the fractions is one or more, the plaintiffs have proved a violation of section 1 or section 2 of the Sherman Act." *City of Groton* v. *Conn. Light & Power Co.*, 662 F.2d 921, 928-29 (2d Cir. 1981); *see also Intergraph*, 195 F.3d at 1366-67 ("*Continental Ore* did not hold . . . that the degrees of support for each legal theory should be added up."). A different rule would have the "potential [of] converting entirely innocent conduct into violations of law," *S. Pac. Communications*, 556 F. Supp. at 888, and would make it impossible for businesses to know, *ex ante*, whether specific conduct complied with the antitrust laws.

Once again confusing procompetitive with anticompetitive conduct, the district court complained that "Microsoft paid vast sums of money, and renounced many millions more in lost revenue every year, in order to induce firms to take actions that would help enhance Internet Explorer's share of browser usage at Navigator's expense." 87 F. Supp. 2d at 44. The district court also stated that "[b]y granting ICPs and ISVs free licenses to bundle Internet Explorer with

their offerings, and by exchanging other valuable inducements for their agreement to distribute, promote and rely on Internet Explorer rather than Navigator, Microsoft directly induced developers to focus on its own APIs rather than ones exposed by Navigator." *Id*. at 42-43. Even if Navigator had exposed APIs comparable in number and functionality to those exposed by the IE components of Windows—which it did not, *see* J.A. 4747-49—Microsoft's efforts to persuade ISVs to utilize Internet-related system services in Windows rather than Navigator represented competition on the merits.

In any event, the district court found that Microsoft's agreements with ICPs did not have "a substantial, deleterious impact on Navigator's usage share," 84 F. Supp. 2d at 92 (FF 332), and there is no finding that Microsoft's agreements with ISVs in fact restricted their distribution of Navigator. Similarly, Apple's agreement to make IE the default Web browsing software for the Mac OS (as part of three interrelated agreements resolving several outstanding issues between the companies) was hardly anticompetitive, especially since Apple reserved the right to continue distributing Navigator—and did. J.A. 3789-90; J.A. 5404-05. Finally, Microsoft's dealings with Intel, with Apple regarding QuickTime and with RealNetworks were routine discussions directed at technical collaboration and product interoperability—and they all came either to naught or to nothing of commercial consequence. *See supra* pp. 55-62.

C. No Causal Link Was Shown between the Allegedly Anticompetitive Acts and the Maintenance of a Purported Monopoly.

"To establish a monopolization claim, the plaintiff must demonstrate that the defendant in fact acquired [or maintained] monopoly power as a result of unlawful conduct." *Ass'n for Intercollegiate Athletics*, 735 F.2d at 584. Areeda explains:

> To find that a monopolist's act may improperly impair rivals' opportunities does not say how substantial a contribution that act has made or may make to achieving or maintaining the monopoly. The effect may in fact be marginal or even inconsequential.

III AREEDA ¶ 651c, at 77. "The plaintiff [thus] has the burden of pleading, introducing evidence, and presumably proving by a preponderance of the evidence that reprehensible behavior has *contributed significantly* to the achievement or maintenance of the monopoly." *Id*. ¶ 650c, at 69 (emphasis added). Indeed, the requirement of a causal link between the challenged conduct and the maintenance of monopoly power is inherent in the *Grinnell* test. 384 U.S. at 570-71; *see also PSI Repair Servs., Inc.* v. *Honeywell, Inc.*, 104 F.3d 811, 822 (6th Cir. 1997) (no showing that defendant's conduct "allowed [defendant] to achieve and maintain monopoly power in the [relevant] market.").

Plaintiffs have *never* contended that Microsoft acquired monopoly power unlawfully. To the contrary, the DOJ's own economist in 1995, Nobel Laureate Kenneth Arrow, acknowledged that "Microsoft appears to have achieved its dominant position in its market as a consequence of good fortune and possibly superior product and business acumen." J.A. 10675. As a result, even assuming it possesses monopoly power, Microsoft, "no less than any other competitor, is permitted and indeed encouraged to compete aggressively on the merits." *Foremost Pro Color*, 703 F.2d at 544. As Judge Posner explained, "a firm with lawful monopoly power has no general duty to help its competitors, whether by holding a price umbrella over their heads or by otherwise pulling its competitive punches." *Olympia Equip. Leasing Co.* v. *W. Union Tel. Co.*, 797 F.2d 370, 375 (7th Cir. 1986), *cert. denied*, 480 U.S. 934 (1987).[5]

A firm with a lawful monopoly in one market is also free to compete vigorously in related markets. *See Intergraph*, 195 F.3d at 1360 ("It is an enlargement of antitrust theory and

[5] *See also Ocean State*, 883 F.2d at 1110 ("Section 2 does not prohibit vigorous competition on the part of a monopoly."); *Ball Mem'l Hosp.*, 784 F.2d at 1339 ("Even the largest firms may engage in hard competition, knowing that this will enlarge their market shares.");

policy to prohibit downstream integration by a 'monopolist' into new markets.").[6] There is no dispute that Microsoft entered the alleged "browser" market at a time when Netscape was dominant. 84 F. Supp. 2d at 46, 98-99 (FF 143, 360). Nor is there any dispute that Microsoft's efforts to develop, promote and distribute IE resulted in lower prices, more rapid innovation and broader distribution of Web browsing software, all to the benefit of consumers. *Id*. at 110-11 (FF 408). Such unambiguously procompetitive conduct in one alleged market does not violate Section 2 simply because it supposedly had collateral effects in another alleged market. III AREEDA ¶ 651b, at 77 ("Antitrust law should not base the imposition of sanctions on the very conduct it would encourage.").

In arguing that Microsoft maintained a PC operating system monopoly by restricting distribution of Navigator—a product the district court placed in a separate product market, 84 F. Supp. 2d at 17-18, 58 (FF 28-29, 199-201)—plaintiffs relied on a speculative chain of causation consisting of at least three steps: (i) Netscape would successfully develop Navigator into a platform that exposed enough high quality APIs to allow ISVs to write full-fledged applications; (ii) large numbers of ISVs would write applications that relied solely on APIs exposed by Navigator (or other middleware like Sun's Java technologies) without making calls to the under-

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Northeastern Tel. Co. v. *AT&T*, 651 F.2d 76, 93 (2d Cir. 1981) ("Even monopolists must be allowed to do as well as they can with their business."), *cert. denied*, 455 U.S. 943 (1982).

[6] *See also Alaska Airlines, Inc.* v. *United Airlines, Inc.*, 948 F.2d 536, 548 (9th Cir. 1991) ("The anticompetitive dangers that implicate the Sherman Act are not present when a monopolist has a lawful monopoly in one market and uses its power to gain a competitive advantage in the second market."), *cert. denied*, 503 U.S. 977 (1992); *Advanced Health-Care Servs., Inc.* v. *Radford Cmty. Hosp.*, 910 F.2d 139, 147 n.14 (4th Cir. 1990) ("A firm, even one with monopoly power, is not guilty of predatory exclusionary conduct when it is simply exploiting the competitive advantages legitimately available to it."); *Berkey Photo, Inc.* v. *Eastman Kodak Co.*, 603 F.2d 263, 267 (2d Cir. 1979) ("So long as we allow a firm to compete in several fields, we must expect it to seek the competitive advantages of its broad-based activity—more efficient

lying operating system, thus eliminating the "applications barrier to entry"; and (iii) the business of providing Intel-compatible PC operating systems that provide low-level support for this middleware—essentially an operating system kernel—would be sufficiently attractive commercially to entice new entrants into the market, even though the principal value of an operating system would have been usurped by the middleware layer. *See* J.A. 9808-11.

The district court's findings do not support a single link in this chain of supposition, much less the entire chain. To the contrary, the district court found that "[i]t remains to be seen . . . whether there will ever be a sustained stream of full-featured applications written solely to middleware APIs," 84 F. Supp. 2d at 18 (FF 29), and that "it is not clear whether ISVs will ever develop a large, diverse body of full-featured applications that rely solely on APIs exposed by . . . middleware," *id.* at 25 (FF 56). The district court thus concluded that "[t]here is insufficient evidence to find that, absent Microsoft's actions, Navigator and Java already would have ignited genuine competition in the market for Intel-compatible PC operating systems."' *Id.* at 112 (FF 411). Moreover, Netscape's Barksdale denied that Netscape ever believed that Navigator could supplant Windows as the leading platform for PC applications. J.A. 4747-49. Given the severely reduced value of an operating system in a world in which applications are written to middleware, it is also doubtful—and unproven—that significant entry into the operating system business would occur. Absent the requisite causal connection between the challenged conduct and the maintenance of a monopoly, there can be no violation of Section 2.

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production, greater ability to develop complementary products, reduced transaction costs, and so forth."), *cert. denied*, 444 U.S. 1093 (1980).

III.

Microsoft Did Not Attempt To Monopolize the Alleged "Browser" Market.

The district court held that Microsoft attempted to monopolize a "browser" market in violation of Section 2. 87 F. Supp. 2d at 45-46. "[T]o demonstrate attempted monopolization a plaintiff must prove (1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power." *Spectrum Sports*, 506 U.S. at 456. All three elements are lacking here.

A. Microsoft Did Not Engage in Anticompetitive Conduct.

In sustaining plaintiffs' attempted monopolization claim, the only conduct mentioned by the district court in addition to that said to support plaintiffs' monopoly maintenance claim was the June 1995 discussions between Microsoft and Netscape. 87 F. Supp. 2d at 45.

Before the release of Windows 95, Microsoft attempted to persuade Netscape to design its version of Navigator for Windows 95 to rely on Internet-related APIs exposed by the operating system—in other words, Microsoft "evangelized" its platform. *See* 84 F. Supp. 2d at 31-32 (FF 81-83). Such technical discussions between an operating system vendor and an ISV are commonplace, and necessary to ensure interoperability of products that *must* work together. J.A. 3692-98; J.A. 3333-37; J.A. 4030-31; *see also* J.A. 11727. As the Supreme Court has recognized, "'some activities can only be carried out jointly.'" *NCAA*, 468 U.S. at 101 (quoting ROBERT H. BORK, THE ANTITRUST PARADOX 278 (1978)). In fact, the DOJ itself has recognized that collaborations among competitors in high-technology industries "often are not only benign but procompetitive." US DOJ & FTC, GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS, 4 Trade Reg. Rep. (CCH) ¶ 13,161, at 20,851 (Apr. 7, 2000). To proscribe the sort of discussions that occurred between Microsoft and Netscape before the release of Windows 95

would cast a cloud over the legitimacy of routine discussions among hardware and software vendors that often involve one firm's agreeing to build on another's technology.

The district court also found that Microsoft withheld technical information from Netscape about Windows 95 prior to the operating system's release. 84 F. Supp. 2d at 33-34 (FF 90-92). The district court thus condemned Microsoft both for (i) seeking to persuade Netscape to rely on some Windows 95 APIs and (ii) failing to provide Netscape with timely access to other Windows 95 APIs. Even accepting the district court's finding, Microsoft was under no obligation to assist Netscape by predisclosing technical information about Windows 95 prior to its release. *Berkey*, 603 F.2d at 281; *see also David L. Aldridge Co.* v. *Microsoft Corp.*, 995 F. Supp. 728, 750 (S.D. Tex. 1998) ("Microsoft did not have an affirmative duty to predisclose . . . the new design of Windows95 to [a developer of complementary software]."). The case law has consistently affirmed that a firm, even one with monopoly power, "is under no obligation to predisclose or disclose its knowledge about its products so that competition may arise in [related markets]." *Data Gen. Corp.* v. *Grumman Sys. Support Corp.*, 761 F. Supp. 185, 192 (D. Mass. 1991), *aff'd*, 36 F.3d 1147 (1st Cir. 1994).

B. Microsoft Did Not Act with a Specific Intent To Monopolize the Alleged "Browser" Market.

"Unilateral conduct that may adversely affect another's business, but is not intended to monopolize that business, does not violate the Sherman Act." *Intergraph*, 195 F.3d at 1354-55. In fact, "the notion that proof of unfair or predatory conduct alone is sufficient to make out the offense of attempted monopolization is contrary to the purpose and policy of the Sherman Act." *Spectrum Sports*, 506 U.S. at 457. A plaintiff instead must show that the defendant specifically intended to achieve monopoly power. *Great Escape, Inc.* v. *Union City Body Co.*, 791 F.2d 532, 541 (7th Cir. 1986).

"[T]he necessary intent to monopolize . . . is something more than an intent to compete vigorously." *Spectrum Sports*, 506 U.S. at 459. As this Court has held:

> [S]pecific intent in attempted monopolization cases has little relation to the defendant's altruistic or malevolent motivations. Rather, specific intent in this context refers to a purpose to acquire monopoly power by driving one's rival from the market by exclusionary or predatory means.

Ass'n for Intercollegiate Athletics, 735 F.2d at 585. On the district court's own findings, Microsoft lacked the requisite specific intent to acquire monopoly power in Web browsing software, a "product" whose competitive price is zero, *see* 84 F. Supp. 2d at 58 (FF 201); J.A. 4309-10, 4457; J.A. 3754-57.

The district court stated that "the evidence is insufficient to find that Microsoft's ambition is a future in which most or all of the content available on the Web would be accessible only through its own browsing software." 84 F. Supp. 2d at 104 (FF 384). The district court instead concluded that Microsoft sought to increase IE's usage share to prevent Navigator from "becoming the standard software for browsing the Web." *Id*. at 103 (FF 377). According to the district court, Microsoft was concerned that if ISVs "believed that Navigator would emerge as the standard software employed to browse the Web," they might "write their applications to rely on the APIs that Navigator exposed." *Id*. at 43 (FF 133). The district court thus determined that Microsoft's goal was to "demonstrate that Navigator would not become the standard" Web browsing software by "attract[ing] just as much if not more usage" for IE. *Id*.; *see also* J.A. 1375. Microsoft's efforts to prevent Netscape from monopolizing the alleged "browser" market do not establish that Microsoft specifically intended to gain such a position for itself. *See Abcor*, 916 F.2d at 927.

In its conclusions of law, the district court again acknowledged that Microsoft's intent was to "demonstrate to developers that Navigator would never emerge as the standard software

employed to browse the Web." 87 F. Supp. 2d at 45. It nevertheless held that Microsoft possessed the requisite specific intent by equating *specific intent* with *negligence*:

> While Microsoft's top executives never expressly declared acquisition of monopoly power in the browser market to be the objective, they knew, *or should have known*, that the tactics they actually employed were likely to push Internet Explorer's share to those extreme heights . . . . [T]here is no evidence that Microsoft tried—or even considered trying—to prevent its anticompetitive campaign from achieving overkill.

Id. (emphasis added). This judicial legerdemain must fail. The offense of attempted monopolization requires a *specific intent* to monopolize, which cannot be shown by evidence of negligence (even gross negligence or recklessness). *United States* v. *ALCOA*, 148 F.2d 416, 431-32 (2d Cir. 1945). Microsoft did not act with such a specific intent, and the district court's attempt to manufacture it should be rejected as another effort to proscribe aggressive competition.

C. There Is No Dangerous Probability of Monopolization.

Section 2 "makes the conduct of a single firm unlawful only when it actually monopolizes or dangerously threatens to do so." *Spectrum Sports*, 506 U.S. at 459. The district court held that Microsoft's June 1995 discussions with Netscape created a dangerous probability of monopolization because "[h]ad Netscape accepted Microsoft's offer, nearly all of its share would have devolved upon Microsoft." 87 F. Supp. 2d at 45-46. Although it acknowledged that "Netscape's rejection of Microsoft's proposal" eliminated this hypothetical possibility, the district court held that Microsoft's conduct "since June of 1995 has revived the dangerous probability that Microsoft will attain monopoly power in a second market" because "Internet Explorer's share of browser usage has already risen above fifty percent." *Id*. at 46.

To determine whether there is a dangerous probability of monopolization, it is first necessary to define the relevant market. *Spectrum Sports*, 506 U.S. at 455-56; *AD/SAT*, 181 F.3d at 226-30. Rather than conduct the requisite product market analysis, 87 F. Supp. 2d at 45, the

district court simply accepted plaintiffs' unproven allegation of a "browser" market. *But see* J.A. 4454-58; J.A. 1734-35. In addition to this obvious error—which alone is fatal to the district court's attempted monopolization ruling—both aspects of the district court's "dangerous probability" analysis are wrong.

1. Microsoft's June 1995 Discussions with Netscape Did Not Create a Dangerous Probability of Monopolization.

In holding that Microsoft's June 1995 discussions with Netscape created a dangerous probability of monopolization, the district court relied on *United States* v. *American Airlines, Inc.*, 743 F.2d 1114 (5th Cir. 1984), *cert. dismissed*, 474 U.S. 1001 (1985), a clearly distinguishable case. In *American Airlines*, American's CEO, Robert Crandall, in a tape-recorded telephone conversation, asked Braniff's CEO, Howard Putnam, to fix prices. Crandall's statement was remarkably blunt, "Raise your goddamn fares twenty percent. I'll raise mine the next morning." *Id*. at 1116. In holding that the government had stated a claim for attempted monopolization despite Putnam's rejection of Crandall's proposal, the court stated:

> Both Crandall and Putnam were the chief executive officers of their airlines; each arguably had the power to implement Crandall's plan. The airlines jointly had a high market share in a market with high barriers to entry. American and Braniff, at the moment of Putnam's acceptance, would have monopolized the market.

Id. at 1118. Based on these special facts, the court concluded that the complaint sufficiently alleged a dangerous probability of success. *Id*. at 1119. The court saw "Crandall's alleged conduct as *uniquely unequivocal* and its potential, given the alleged market conditions, as being *uniquely consequential*." *Id*. (emphasis added).

The June 1995 discussions between Microsoft and Netscape are a far cry from the brazen price-fixing proposal in *American Airlines*. In June 1995, Web browsing software was a nascent business: Microsoft had not yet released Windows 95—and thus had *no* share of the alleged market—and Netscape had released the first version of Navigator only six months earlier. There

is no evidence that, had Netscape accepted Microsoft's alleged proposal, "nearly all of its share would have devolved upon Microsoft," 87 F. Supp. 2d at 45-46, as opposed to some other company already producing Web browsing software such as Apple, BookLink, IBM or Spyglass. Plaintiffs also did not allege, and the district court did not find, that there are *any* barriers to entry into the "browser" market—indeed, Netscape was able to release Navigator six months after the company was founded. J.A. 3361. In addition, the Microsoft representatives who attended the June 21 meeting were not senior executives capable of binding the company. J.A. 4063-67. And, even accepting the district court's findings, the discussions were not "uniquely unequivocal," nor was their potential "uniquely consequential." Barksdale testified that Microsoft's proposal was vague and *in futuro*, J.A. 5244-46, and the companies' discussions related to product development (invariably procompetitive) not price fixing (invariably anticompetitive). Finally, it was Microsoft that dropped "the effort to reach a strategic concord" following the meeting. 84 F. Supp. 2d at 33 (FF 87).

2. AOL Controls Over One-Third of IE's Usage Share.

Based on its finding that IE's usage share has risen above 50%, the district court concluded that Microsoft "has revived" the dangerous probability of monopolization since June 1995. 87 F. Supp. 2d at 46. Courts have held that shares of 50% or less are insufficient to establish a dangerous probability of monopolization, especially if there are no significant barriers to entry into the market and other strong competitors control sizeable shares. *E.g.*, *U.S. Anchor Mfg., Inc.* v. *Rule Indus., Inc.*, 7 F.3d 986, 1001 (11th Cir. 1993) (below 50% insufficient), *cert. denied*, 512 U.S. 1221 (1994); *Barr Labs., Inc.* v. *Abbott Labs.*, 978 F.2d 98, 111-15 (3d Cir. 1992) (51% insufficient); *Bacchus Indus., Inc.* v. *Arvin Indus., Inc.*, 939 F.2d 887, 894-95 (10th Cir. 1991) (60% insufficient); *Ind. Grocery*, 864 F.2d at 1414 (nearly 50% insufficient); *United*

States v. *Empire Gas Corp.*, 537 F.2d 296, 305-07 (8th Cir. 1976) (47%-50% insufficient), *cert. denied*, 429 U.S. 1122 (1977).

The district court did not find that there are *any* barriers to entry into the putative "browser" market. Nor did the district court find that Netscape—which is now owned by AOL and, according to the district court, still controls nearly half of the putative market—is about to be driven out of business. 84 F. Supp. 2d at 104-05 (FF 385).[7] To the contrary, the district court predicted that "Navigator's installed base will continue to grow." *Id.* at 103 (FF 378); *see also* J.A. 9468; J.A. 12672 (Netscape expected to obtain "10 million new browser customers over the next 18 months.").

More significantly, the district court recognized that "[i]f AOL were to halt its distribution and promotion of Internet Explorer, the effect on Internet Explorer's usage share would be significant, for AOL's subscribers currently account for over one third of Internet Explorer's installed base." 84 F. Supp. 2d at 85 (FF 303). Microsoft's Brad Chase testified:

> [I]f AOL's client software were built on Netscape Navigator, Internet Explorer's usage share would drop from a current 52% to between 24% and 32%, and Navigator would increase from a current 45% to between 66% and 74%. I also believe that it is highly doubtful that CompuServe, which is owned by AOL, will continue to build its client software on Internet Explorer for more than a couple of years. A switch by CompuServe from Internet Explorer to Navigator would further increase Navigator's usage share and decrease Internet Explorer's usage share.

J.A. 3464; *see also* J.A. 13514. In short, IE's usage share is highly vulnerable to decisions made by AOL, a formidable Microsoft competitor and the world's largest IAP. On April 5, 2000—the

[7] *See Dial A Car, Inc.* v. *Transp., Inc.*, 82 F.3d 484, 487 n.2 (D.C. Cir. 1996) ("[N]o facts have been alleged to indicate that *any* company . . . is even close to being driven from the . . . market. This hardly indicates a dangerous probability of successful monopolization.") (emphasis in original); *Transamerica*, 481 F. Supp. at 975 ("Defendant's share is more likely to indicate monopoly power if the rest of the market is widely distributed among many small competing suppliers than it would be if the size of competitors and the market share held by them approached defendant's size and share.").

day after the district court issued its conclusions of law—AOL announced its intent to replace IE with Navigator in AOL's proprietary client software. *See supra* pp. 51.

IV.

The District Court's Extreme Relief Is Unsustainable.

Wholly apart from the district court's erroneous liability determinations, the relief entered cannot stand, for both procedural and substantive reasons. Although a district court's decision to enter equitable relief is typically reviewed for abuse of discretion, no such deference is appropriate here given the district court's (i) refusal to hold an evidentiary hearing and allow Microsoft to present evidence on relief, (ii) failure to make findings to support the relief entered, (iii) reliance on improper factors and information outside the record, and (iv) admitted deference to plaintiffs' proposed remedy. Moreover, because the district court did not attribute specific provisions of the decree to specific violations, the whole decree must be vacated should any part of the district court's liability ruling be reversed. *Cf. Concord Boat*, 207 F.3d at 1053-54.

A. The District Court Improperly Entered a Sweeping Decree without a Hearing.

The nature and scope of relief, like all other disputed issues in a civil action, must be tried. *See Charlton* v. *Estate of Charlton*, 841 F.2d 988, 989 (9th Cir. 1988). There is no rule of law dispensing with that requirement in antitrust cases. In fact, the Supreme Court has emphasized that the formulation of an antitrust decree is the "most significant phase of the case." *United States* v. *U.S. Gypsum Co.*, 340 U.S. 76, 89 (1950). Accordingly, the district court was not at liberty to enter sweeping relief, over Microsoft's objection, without conducting an evidentiary hearing and affording Microsoft an opportunity to present evidence on all disputed issues. Nor was the district court free to enter such relief without making findings of fact based on admissible evidence regarding the terms of the decree. The entire decree should be vacated on these grounds alone.

By submitting six lengthy declarations and more than 50 new exhibits in support of their proposed final judgment, plaintiffs acknowledged that the existing trial record was insufficient to support the radical relief they requested. Whereas the trial focused on Microsoft's competition with Netscape in developing and distributing Web browsing software, plaintiffs' proposed decree was much broader, (i) encompassing products like Microsoft Office, Windows 2000 Server and Windows CE that are outside the markets defined by the district court, and (ii) addressing complex issues that were not even mentioned at trial, such as interoperability between PC operating systems and non-Microsoft server operating systems. Indeed, plaintiffs themselves requested that the district court enter their proposed decree only "after appropriate proceedings." J.A. 2535.

The district court did not find that plaintiffs' proposed decree and Microsoft's vehement opposition thereto created no triable issues of fact. To the contrary, the district court recognized that plaintiffs' declarations and Microsoft's offers of proof presented highly divergent views on the "effects which may or may not ensue if the proposed final judgment is entered." 97 F. Supp. 2d at 62. The district court rejected Microsoft's request for an evidentiary hearing not because such a hearing was unnecessary to resolve factual issues, but because it did not think that testimony from knowledgeable witnesses would be useful in resolving such issues. *Id*. ("In its experience the Court has found testimonial predictions of future events generally less reliable even than testimony as to historical fact, and cross-examination to be of little use in enhancing or detracting from their accuracy."). The district court's doubts about the utility of evidentiary hearings are not grounds for repudiating this core element of due process.

The opinion accompanying the decree also makes clear that the district court relied on inadmissible evidence in imposing relief. The district court noted that "Microsoft officials have

recently been quoted publicly to the effect that the company has 'done nothing wrong' and that it will be vindicated on appeal." *Id*. Leaving aside the fact that Microsoft's continued belief that its conduct was lawful is not grounds for any relief, much less breaking up the company, the only conceivable basis for the district court's statement is hearsay submitted by plaintiffs. *E.g.*, J.A. 10700. In fact, the district judge has publicly stated that he ordered the breakup of Microsoft based on statements attributed to two senior executives in the press. In March 2000, the district judge reportedly said:

> I am not at all comfortable with restructuring the company. I am not sure I am competent to do that. Microsoft is a large and important company, innovative, admirable in a lot of ways. If it ain't broken, don't try to fix it. And it is an engine for the nation's economy. I just don't think that is something I want to try to do on my own.

BRINKLEY & LOHR, *supra* at 277-78. When later asked to explain his 180 degree change of position, the district judge said, "I've been astounded by some of the statements of Gates and Ballmer." *Id.* at 315.

The district court also stated in its opinion that "there is credible evidence in the record to suggest that Microsoft . . . continues to do business as it has in the past, and may yet do to other markets what it has already done in the PC operating system and browser markets." 97 F. Supp. 2d at 62. The only conceivable bases for that assertion are plaintiffs' hearsay declarations and an amicus brief filed by two associations comprised of Microsoft competitors. Such documents are not evidence, even if they were relevant to the issue of relief.

The district court further asserted that plaintiffs "have some entitlement to a remedy of their choice" because they "won the case." 97 F. Supp. 2d at 62. And the district court was apparently impressed that plaintiffs' proposal was "the collective work product of senior antitrust law enforcement officials of the United States Department of Justice and the Attorneys General of 19 states, in conjunction with multiple consultants," who "are by reason of office obliged and

expected to consider—and to act in—the public interest." *Id.* at 62-63. The fact that plaintiffs prevailed on liability does not resolve the issue of relief, and the district court's blind deference to the wishes of the Executive Branch as a party to an Article III case or controversy raises serious due process and separation of powers issues.

The district court's handling of remedies stands in sharp contrast to other antitrust cases in which courts have held additional hearings when the trial record was insufficient to support the requested relief. In *United States* v. *ALCOA*, 91 F. Supp. 333, 347 (S.D.N.Y. 1950), the district court held nearly 40 days of hearings over ten months on the government's request for structural relief. Similarly, in *Ford Motor Co.* v. *United States*, 405 U.S. 562, 571, 573-75 (1972), the district court "held nine days of hearings on the remedy" before ordering Ford to divest the Autolite tradename and Autolite's spark plug plant, even though divestiture is the standard remedy for violations of Section 7 of the Clayton Act. *See also United States* v. *GE*, 115 F. Supp. 835, 839 (D.N.J. 1953). There is, in short, no precedent for the district court's refusal to take evidence on relief.

B. The Breakup of Microsoft Is Unwarranted as a Matter of Law.

Under general equity principles, an injunction should be no more burdensome than necessary to prevent recurring violations of the law. *See Madsen* v. *Women's Health Ctr., Inc.*, 512 U.S. 753, 765 (1994). The district court's findings and conclusions of law do not begin to justify breaking up Microsoft, extreme relief not even hinted at in the complaints. Leaving aside negotiated consent decrees, no court has ever split apart a unitary company not formed by mergers. *See generally* RICHARD A. POSNER, ANTITRUST LAW, AN ECONOMIC PERSPECTIVE 78-95 (1976). Microsoft did not become the leading supplier of operating systems by acquiring its rivals. Rather, it built its current position from scratch by (i) developing a succession of operating systems, each markedly better than its predecessors, (ii) broadly licensing those products to

OEMs at attractive prices, and (iii) evangelizing system services supplied by those products to ISVs. The fact that no court has ever ordered the breakup of a unitary company like Microsoft demonstrates the extreme nature of the district court's decree.

1. The Breakup Is Unjustified Absent a Significant Causal Connection between Microsoft's Conduct and Market Position.

"The mere existence of an exclusionary act does not itself justify full feasible relief against [a] monopolist to create maximum competition." III AREEDA ¶ 650a, at 67. Instead, "more extensive equitable relief, particularly remedies such as divestiture designed to eliminate the monopoly altogether, . . . *require a clearer indication of a significant causal connection between the conduct and creation or maintenance of the market power*." *Id.* ¶ 653b, at 91-92 (emphasis added). If—as here—the requisite causal connection between the challenged conduct and defendant's market position is wholly absent, the most that should be ordered as relief is "an injunction against continuation of that conduct." *Id.* ¶ 650a, at 67. Were the law otherwise, a single anticompetitive act by a firm with lawful monopoly power could result in dissolution, even though that act had little or no impact on the firm's market position.

As explained above, plaintiffs have never contended that Microsoft acquired monopoly power unlawfully. J.A. 10675. Nor did the district court find that, but for the conduct held to be anticompetitive, Microsoft would have lost its leading position in operating systems—in fact, the district court disavowed such a finding. 84 F. Supp. 2d at 112 (FF 411). Because the district court did not find a causal connection—much less a significant one—between the challenged conduct and Microsoft's market position, the most the district court should have done was enjoin continuation of such conduct. As the DOJ's own expert, Kenneth Arrow, stated in 1995, "A rule penalizing market successes that are not the result of anticompetitive practices will, among other

consequences, have the effect of taxing technological improvements and is unlikely to improve welfare in the long run." J.A. 10674.

2. The Breakup Extends Far Beyond What Is Necessary To Redress the Conduct Found To Be Anticompetitive.

Contrary to the district court's assertion that "well-established Supreme Court precedents" provide that dissolution is the presumptive remedy in monopolization cases, 97 F. Supp. 2d at 61, "it never follows automatically from the finding of a § 2 violation that dissolution or divestiture is in order," III AREEDA ¶ 653a, at 91. Dissolution is "extreme, even in its mildest demands," *United States* v. *United Shoe Mach. Co.*, 247 U.S. 32, 46 (1918), and it is "not to be used indiscriminately, without regard to the type of violation or whether other effective methods, less harsh, are available," *Timken Roller Bearing Co.* v. *United States*, 341 U.S. 593, 603 (1951) (Reed, J., concurring).

The Supreme Court's decision in *United States* v. *National Lead Co.*, 332 U.S. 319 (1947), is illustrative of courts' reluctance to order divestiture. There, the district court found that National Lead and du Pont violated the Sherman Act by jointly using their patents to control the manufacture and sale of titanium pigments and compounds, and enjoined the violation. 63 F. Supp. 513, 532, 534 (S.D.N.Y. 1945). On appeal, the government asked the Supreme Court also to require National Lead and du Pont each to divest one of its two principal titanium pigment plants. 332 U.S. at 351. In rejecting this request, the Supreme Court stated:

> We believe there is neither precedent nor good reason for such a requirement. The violation of the Sherman Act is found in these cases in the patent pooling and in the related agreements restraining interstate and foreign commerce. There is neither allegation in the complaint nor finding of fact by the District Court that the physical properties of either National Lead or du Pont have been acquired or used in a manner violative of the Sherman Act, except as such acquisition or use may have been incidental or related to the agreements above mentioned. The cancellation of such agreements and the injunction against the performance of them by the appellant companies eliminate them.

Id. at 351. The Supreme Court added: "To separate the operating units of going concerns without more supporting evidence than has been presented here to establish either the need for, or the feasibility of, such separation would amount to an abuse of discretion." *Id*. at 353.

The violations found by the district court, if sustained, could be redressed by an injunction against the conduct held to be anticompetitive. Dividing Microsoft into two separate companies (one that would have Microsoft's operating systems and the other that would have Microsoft's applications, other products and numerous operating system components) is drastic and unjustified—and certain to require ongoing judicial supervision as the businesses of the two resulting companies evolve. Plaintiffs did not allege, and the district court did not find, that Microsoft's development of both operating systems and applications itself suppresses competition in operating systems. Plaintiffs also presented no evidence that there would be more competition in the market for "Intel-compatible PC operating systems" if the Windows version of Microsoft Office—a product hardly mentioned at trial—were owned by an independent company. Lastly, the district court did not articulate a proper basis for dissolution. It instead stated, 97 F. Supp. 2d at 62, that structural relief was necessary because Microsoft "does not yet concede that any of its business practices violated the Sherman Act" and "proved untrustworthy" in the Consent Decree Case (the latter assertion being demonstrably false, *see supra* pp. 48-49). Even if there were a valid basis for such concerns, they would not be legitimate reasons for ordering dissolution under the Sherman Act.

3. The Breakup Is Unwarranted Because the Challenged Conduct Could Reasonably Have Been Thought Permissible.

Uncertainty about the governing law counsels in favor of narrower relief. "Whatever the wisdom of visiting blameworthy conduct with far-reaching equitable sanctions, it disappears when illegality rests on criteria not previously made clear or on facts subject to reasonable

dispute." III AREEDA ¶ 653b4, at 94; *see also U.S. Gypsum*, 340 U.S. at 89-90 ("Acts in disregard of law call for repression by sterner measures than where the steps could reasonably have been thought permissible."). In *United States* v. *United Shoe Machinery Corp.*, 110 F. Supp. 295, 348 (D. Mass. 1953), *aff'd*, 347 U.S. 521 (1954), for example, Judge Wyzanski rejected the government's request to split United Shoe into three companies in part because "[u]ntil Alcoa lost its case in 1945, there was no significant reason to suppose that United's conduct violated Sec. 2 of the Sherman Act."

The conduct that was the cornerstone of plaintiffs' case—Microsoft's development of improved versions of Windows that included IE—was not clearly barred under existing case law. Even the district court acknowledged that this Court and other courts have articulated a different standard for "technological tying." 87 F. Supp. 2d at 51. Under that different standard, Microsoft's conduct was perfectly lawful. The district court also held that Microsoft's agreements with various IAPs—the other major element of plaintiffs' case—did not violate Section 1 because the agreements did not "deprive Netscape of the ability to have access to every PC user worldwide to offer an opportunity to install Navigator." *Id*. at 53. The district court cited no authority for its conclusion that such agreements nevertheless could violate Section 2. *Id.* Breaking up Microsoft for conduct that was not unambiguously anticompetitive would be improper.

4. The Breakup Would Jeopardize Important Public Benefits.

Courts are reluctant "to tamper unnecessarily with economic and industrial forces from which the public has reaped substantial benefits." *ALCOA*, 91 F. Supp. at 416. The public has reaped substantial benefits from Microsoft's development of a host of software products. Indeed, Microsoft's provision of a common platform for software development—Windows—has

promoted the creation of a wide range of compatible software and hardware that has made PCs more functional and easier to use, contributing significantly to the Nation's economic growth.

Microsoft's unified structure also enables it to conceive and implement bold ideas that span operating systems and applications. A breakup would greatly retard Microsoft's ability to develop innovative products such as the "Pocket PC," "Tablet PC," "electronic book" reader and X-Box game console. Indeed, cross-pollination between engineers working on different products such as Windows and Office has led to numerous innovations. For instance, the concept of tool-bars, now a basic element of all Windows applications, was developed first by the team building Microsoft Excel, the spreadsheet component of Office. The functionality then was incorporated into Windows and made available to all ISVs as a system service exposed through APIs.

5. The Breakup Would Create Enormous Practical Problems Not Considered by the District Court.

In *United Shoe*, Judge Wyzanski explained the practical problems associated with breaking up a unitary company:

> United conducts all machine manufacture at one plant in Beverly, with one set of jigs and tools, one foundry, one laboratory for machinery problems, one managerial staff, and one labor force. It takes no Solomon to see that this organism cannot be cut into three equal and viable parts.

110 F. Supp. at 348; *see also ALCOA*, 91 F. Supp. at 416 ("A corporation, designed to operate effectively as a single entity, cannot readily be dismembered of parts of its various operations without a marked loss of efficiency."). Indeed, "[t]o say that courts are not good at designing or engineering such breakups is a gross understatement of reality." III AREEDA ¶ 630a, at 45.

Like United Shoe, Microsoft is a unitary company, with one headquarters, one sales force, one set of senior managers who set policy for the entire company, one set of sales and marketing subsidiaries and one set of operational departments. Microsoft is *not* an agglomeration

of separate operating companies like American Tobacco, Standard Oil and AT&T were. *See* J.A. 2764-67.

C. The Other Extreme Relief Entered by the District Court Is Punitive and Not Justified by the Antitrust Violations Found.

"Courts are not authorized in civil proceedings to punish antitrust violators, and relief must not be punitive." *United States* v. *E.I. du Pont de Nemours & Co.*, 366 U.S. 316, 326 (1961); *accord United States* v. *Or. State Med. Soc'y*, 343 U.S. 326, 333 (1952); *National Lead*, 332 U.S. at 338; *see also* II AREEDA ¶ 345, at 162 ("The purpose of the decree is not punitive, and it will not embody harsh measures when less severe ones will do."). The so-called "conduct" remedies imposed here are punitive, extending far beyond the case that was tried and encompassing products like Windows CE and Windows 2000 Server that are outside the markets defined by the district court. Those remedies should be rejected as a matter of law for essentially the same reasons that the breakup is unwarranted.

It is impossible in the space available to catalog all of the untoward features of the so-called "conduct" remedies, a task made more difficult by the district court's refusal to conduct a hearing on these highly technical subjects. Those problems are discussed in more detail in (i) Microsoft's summary response to plaintiffs' proposed final judgment, (ii) Microsoft's comments on plaintiffs' revised proposed final judgment, and (iii) Microsoft's offer of proof and supplemental offer of proof. Microsoft focuses here on the provisions that would result in confiscation of Microsoft's intellectual property and would interfere with the design of Microsoft's operating systems.

1. The Decree Would Require Microsoft To Disclose Proprietary Information about Its Operating Systems to Its Competitors.

Section 3.b of the decree would require Microsoft to disclose proprietary information about its operating systems—without charge—to all OEMs, ISVs and independent hardware

vendors ("IHVs"), in other words, to all its competitors. 97 F. Supp. 2d at 67. This requirement would effectively place in the public domain billions of dollars worth of Microsoft's intellectual property, including information protected by federal patent and copyright laws and state trade secret laws. It is hard to reconcile the need for such punitive relief with the fact that ISVs have developed literally tens of thousands of Windows applications *without* access to Microsoft's proprietary information.

The breadth of Section 3.b is staggering. It would require Microsoft to disclose "all APIs, Technical Information and Communications Interfaces" used to enable: (i) "Microsoft applications to interoperate with Microsoft Platform Software" (§ 3.b.i), (ii) "a Microsoft Middleware Product"—*which is defined to include various components of the operating system itself*—"to interoperate with Windows Operating System software" (§ 3.b.ii), and (iii) "any Microsoft software installed on one computer (including but not limited to server Operating Systems and operating systems for handheld devices) to interoperate with a Windows Operating System" installed on a PC (§ 3.b.iii). *Id*. The over-breadth of this provision is exacerbated by the decree's expansive definitions. For instance, the term "APIs" (§ 7.b) is defined as *all* interfaces and protocols—including unpublished interfaces and protocols used by the operating system for its own internal operations—that might enable a hardware device, application, middleware or server operating system to "benefit from" the "resources, facilities, and capabilities" of a Microsoft operating system. *Id*. at 71.

Forcing Microsoft to disclose internal interfaces in its operating systems would create serious problems. Internal interfaces between two defined blocks of code, such as components of an operating system, are not designed and tested to interact with third-party products. Allowing such products to "hack" into Microsoft's operating system in unexpected ways would likely

cause the operating system or applications running on it to malfunction. Moreover, Microsoft's ability to improve its operating systems while maintaining backward compatibility with existing applications would be complicated immeasurably if third-party products were permitted to rely on internal interfaces of Microsoft's operating systems. *See* J.A. 2754-57.

If any doubt existed that Section 3.b would force Microsoft to disclose nearly all intellectual property associated with Windows, it is eliminated by the requirement that Microsoft "create a secure facility where qualified representatives of OEMs, ISVs and IHVs shall be permitted to study, interrogate and interact with . . . the source code" of any Microsoft operating system. 97 F. Supp. 2d at 67. Although the purpose of such inspection ostensibly is limited to the development of products that "interoperate effectively" with Windows, that limitation is meaningless: a competitor seeking to "clone" innovative features of Microsoft's operating systems could easily claim a need to ensure that its products "interoperate effectively" with Windows. Source code often contains detailed comments describing the design and operation of a software product. Disclosure of Windows source code thus not only would facilitate theft of Microsoft's intellectual property, but also would—in the hands of a skilled software engineer—provide invaluable insight into the methodology used by Microsoft in developing new software. The importance of preserving the confidentiality of source code is reflected in the fact that only the first and last ten pages of source code of a software product need be deposited with the Copyright Office in applying for a copyright registration. 37 C.F.R. § 202.20(c)(2)(vii)(A)(2).

There is no justification for Section 3.b. The district court did not find that Microsoft obtained any of its intellectual property improperly, and the entire subject of "interoperability" between PCs and servers or handheld devices was never addressed at trial. Moreover, plaintiffs pointed to only *one* instance in which Microsoft supposedly denied an ISV access to technical

information about Windows, namely, Netscape's request that Microsoft expose RNA functionality in Windows 95 through documented APIs. *See supra* pp. 28-29. There is no doubt that Microsoft ultimately complied with that request; the only issue was one of timing. 84 F. Supp. 2d at 33 (FF 90-91). Nor is there any doubt that Netscape was able to release an extremely successful version of Navigator for Windows 95 "roughly concurrently" with the release of the operating system. J.A. 12950. This one incident is far too slender a reed to support the broad confiscation of Microsoft's intellectual property worked by Section 3.b, especially since Microsoft was under no legal obligation to assist Netscape.

2. The Decree Would Interfere with the Design of Microsoft's Operating Systems.

The decree also would interfere with Microsoft's product design and impair Microsoft's ability to preserve the integrity of Windows and to distribute upgraded components of Windows to its installed base of users. Nothing in the district court's ruling justifies such extreme relief, which would injure rather than benefit consumers. Based presumably on its determination that Microsoft's inclusion of Web browsing functionality in Windows was unlawful, the district court effectively prohibited Microsoft from adding any new functionality to its operating system unless that functionality is removable by OEMs and users. Such a prohibition would not only stifle innovation, but also generate endless litigation over the design of Microsoft's operating systems.

Section 3.g. Section 3.g provides that Microsoft shall not "Bind any Middleware Product to a Windows Operating System" unless "Microsoft also offers an otherwise identical version of that Operating System Product in which all means of End-User Access to that Middleware Product can readily be removed" by OEMs and users. 97 F. Supp. 2d at 68. The breadth of the definition of "Middleware Product" (§ 7.r), which includes any software distributed separately from Windows that "provides functionality similar to that provided by Middleware offered by a

competitor to Microsoft," would subject many existing and virtually all new features of Microsoft's operating systems to challenge under the decree. *Id*. at 72-73. In addition, because "End-User Access" (§ 7.j) is defined to include not only invocation by users, but also invocation that "is compelled by the design of the Operating System Product" itself, *id*. at 72, the provision would preclude new operating system features like HTML Help and Windows Update that rely on so-called "Middleware Products" like IE, even if those features could not be duplicated—as they cannot—by installing third-party software products like Navigator.

To make matters worse, Section 3.g would prevent Microsoft from "distribut[ing]" any non-compliant operating system "six or more months after the effective date" of the decree. *Id*. at 68. The provision thus would require Microsoft to reengineer its currently shipping operating systems, including Windows 95, Windows 98, Windows Millenium and Windows 2000 Professional, to enable OEMs and users to remove all "End-User Access" to anything that might be regarded as a "Middleware Product." It would take far longer than six months and would cost hundreds of millions of dollars for Microsoft to redesign its operating systems, and the resulting products would be far inferior to their existing counterparts. If Microsoft could not make the required changes to its operating systems in the time allowed, it would have to halt their distribution, causing severe economic dislocation.

Section 3.g also would regulate the pricing of Microsoft's operating systems by requiring Microsoft to give discounts to OEMs that remove "End-User Access" to a "Middleware Product" based on the ratio of "bytes of binary code of (a) the Middleware Product as distributed separately from a Windows Operating System Product to (b) the applicable version of Windows." *Id*. Because removing or disabling such software code would increase Microsoft's design, testing and support costs and impair the value of Microsoft's Windows trademark, it is not apparent why

such OEMs should receive a discount, especially if only user access to the software code is disabled and the software code still exposes APIs for use by ISVs. Finally, the metric used to calculate the discounts is bizarre: software products are not priced by the number of bytes of code they contain, and there is no direct correlation between the size of a piece of code and the value of the functionality it provides to consumers.

Section 3.a.iii. Section 3.a.iii would permit OEMs to alter Windows significantly and then market their modified versions of Windows using Microsoft's trademarks and logos. *See id*. at 66-67. The effect of this provision on Microsoft would be devastating, enabling OEMs to pass off altered versions of Windows to consumers as Microsoft's creation, contrary to federal copyright and trademark laws. Consumers also would be harmed if the copy of Windows they received with their PC were missing functionality they expected in Microsoft's operating system.

For example, Section 3.a.iii(3) would allow OEMs to "display any user interfaces" in place of the Windows user interface, "provided that an icon is also displayed that allows the user to access the Windows user interface." *Id*. at 67. Under this provision, an OEM would be permitted to obscure the only visible manifestation of Microsoft's creation—the Windows user interface—and yet still promote its PCs using the Windows trademark and logos. As a result, consumers who turned on their PCs the very first time expecting to see the familiar Windows desktop could instead find a foreign—and less functional—user interface. Microsoft could do nothing under the decree to protect itself from the consumer dissatisfaction and harm to its goodwill that inevitably would result.

Section 3.a.iii(4) provides that Microsoft "shall not restrict" any OEM from modifying any "aspect of a Windows Operating System Product" to "launch automatically any non-Microsoft Middleware, Operating System or application." *Id*. at 66-67. Given the expansive

definition of "Middleware" (§ 7.q) and restrictive definition of "Operating System" (§ 7.u), *id*. at 72-73, this provision would give all OEMs (regardless of technical sophistication) unlimited rights to modify Windows in ways that transform it beyond recognition and that would result in the fragmentation of the Windows platform, thus depriving consumers of the most important benefit of Windows—compatibility.

Section 3.f. Section 3.f provides that "Microsoft shall not condition the granting of a Windows Operating System Product license . . . on an OEM or other licensee agreeing to license, promote, or distribute any other Microsoft software product that Microsoft distributes separately from the Windows Operating System Product . . ., whether or not for a separate or positive price." *Id*. at 68. This provision would present Microsoft with a stark choice whenever it added a new feature to Windows or upgraded an existing feature: (i) refuse to make the feature separately available to the installed base of Windows users or (ii) permit OEMs and others to remove from Windows—not just hide access to—the software code that implements the feature.

Many technologies supported in Windows such as HTML and streaming media are evolving rapidly. Microsoft constantly improves its operating systems to take advantage of those technological advances. Nevertheless, Microsoft typically does not release new versions of Windows more often than every two or three years. To enable ISVs and existing Windows users to have access to Microsoft's improvements without waiting for the next major operating system release, Microsoft often makes updated versions of certain Windows components (*e.g*., IE and DirectX) separately available to them. Under the decree, Microsoft could not continue to make improved components separately available to the installed base unless it designed Windows to make those components removable by OEMs and users. Unlike other provisions, Section 3.f contemplates actual removal of software code, as opposed to hiding "End-User Access" to the

functionality it provides. If OEMs exercised their right to remove a separately-distributed Windows component, any APIs exposed by that software code would be lost, and applications that rely on those APIs would not function. The practical result of Section 3.f thus would be to deny consumers access to improved Windows components until Microsoft incorporated them into its next major Windows release.

V.

The District Court Committed Reversible Error in Its Handling of the Case.

The district court's conduct of the trial was highly unusual and prejudicial to Microsoft. Time and again, the district court changed the rules of the game—and always to Microsoft's detriment—as the following three examples illustrate. First, in ruling on Microsoft's summary judgment motion, the district court held that this Court's June 1998 decision governed the tying issue, 1998-2 Trade Cas. (CCH) ¶ 72,261, at 82,674, and Microsoft tried the case in reliance on that holding. Yet, in its conclusions of law, the district court applied *Jefferson Parish*'s very different "consumer demand" test. 87 F. Supp. 2d at 47-51. Second, in Pretrial Order No. 2, the district court stated that, except to show an admission by a party opponent or impeach a trial witness, "deposition excerpts should be offered to prove only subordinate or predicate issues, such as authenticity of exhibits . . . or foundation evidence," J.A. 329, and Microsoft noticed and took depositions in reliance on that limitation. Yet, at trial, the district court permitted plaintiffs to introduce deposition testimony from numerous third parties (*e.g.*, Bruce Jacobsen of RealNetworks) to prove contested issues. Third, at the April 2000 chambers conferences, the district court stated that there would be further proceedings on relief, J.A. 2445-46, 2448, and Microsoft submitted only the "summary" material required by Scheduling Order No. 8 in reliance on that statement. Yet, on May 24, 2000, the district court announced, "I'm not contemplating any further process," J.A. 9866, and closed the record.

Given the limited space available to it, Microsoft focuses here on two related aspects of the district court's flawed handling of the case: (i) its failure to give Microsoft an adequate opportunity to conduct discovery and prepare for trial and to present its case at trial and (ii) its admission into evidence of large amounts of inadmissible hearsay.

A. The District Court Failed To Provide Microsoft with Adequate Opportunity To Prepare for and Defend against a Dramatically Expanded Case.

The district court abused its discretion in rushing this case to trial five months after the complaints were filed and in limiting Microsoft to 12 trial witnesses after plaintiffs were permitted to broaden their case well beyond the narrow claims alleged in their complaints.

A few months for discovery and pretrial preparation is "unheard of in antitrust litigation," particularly in cases involving a monopolization claim. *Chicago Prof'l Sports Ltd. P'ship* v. *NBA*, 961 F.2d 667, 676 (7th Cir. 1992). At an ABA conference, the district judge stated that he put this case on a fast track to "avoid the Vietnam morasses" that the DOJ's Section 2 cases against IBM and AT&T became. *ABA Panel Includes Microsoft Judge*, N.Y.L.J., Aug. 10, 1999, at 2. Although that was perhaps a laudable objective, the breathless pace of the litigation severely prejudiced Microsoft, especially after plaintiffs dramatically expanded their case. In the Seventh Circuit's words, if an antitrust case "ought not resemble a marathon, neither is the 100-yard dash a good model." *Chicago Prof'l Sports*, 961 F.2d at 676.

In the end, many witnesses with knowledge of disputed factual issues could not be deposed, and document discovery was artificially constrained. By way of illustration, Microsoft obtained AOL's due diligence files, which conclusively refuted plaintiffs' claim that Navigator was excluded from the OEM and IAP channels, almost as a matter of happenstance when AOL acquired Netscape after trial began. Had discovery not been unduly curtailed, Microsoft may have obtained evidence on other issues of equal significance. The time crunch imposed on

Microsoft was particularly unfair because plaintiffs, aided by compulsory process, had been investigating the issues tried for years before filing their complaints.

Microsoft repeatedly protested, to no avail, the extreme haste with which the case was rushed to trial. When the district court announced that trial would begin in the fall of 1998, Microsoft objected, "Your Honor, with the greatest of respect, that isn't enough time for us." J.A. 222. And, when it became clear that plaintiffs sought to convert their "surgical strike" into an omnibus Section 2 case, Microsoft filed multiple motions, arguing that the trial should be postponed and that no limitation should be placed on the number of witnesses. J.A. 333; J.A. 364; J.A. 394. Microsoft also moved for a continuance when plaintiffs, less than two weeks before the start of trial, added two new witnesses, Apple's Tevanian and Sun's Gosling, to testify about matters not raised in the complaints. J.A. 403.

Microsoft ultimately had five months to prepare for trial—and much less time to prepare its defenses to plaintiffs' new allegations, which involved highly technical subjects like Java, NSP software and QuickTime. Microsoft also was limited to 12 trial witnesses, plus three rebuttal witnesses. J.A. 242; J.A. 332. As a result, Microsoft was unable to pursue entire avenues of important discovery and trial testimony. For example, Microsoft's ability to show that Netscape's financial reversal in 1997 and 1998 resulted from Netscape's own business mistakes, not from Microsoft's alleged foreclosure of Navigator's distribution, was severely hamstrung by the schedule imposed by the district court. Microsoft likewise had to content itself with minimal discovery and trial time devoted to such key third parties as AOL, Intuit, IBM and Compaq.

B. The District Court Created a Procedural Framework in Which Reliance on Hearsay Was Inevitable.

Although a party seeking reversal based on erroneous admission of hearsay in a bench trial bears a heavy burden, *Northwestern Nat'l Cas. Co.* v. *Global Moving & Storage, Inc.*, 533

F.2d 320, 324 (6th Cir. 1976), that burden is met here. The district court largely suspended application of the Federal Rules of Evidence at trial, admitting scores of newspaper and magazine articles and other rank hearsay.

In fact, the expansion of plaintiffs' case, together with the limitation on the number of witnesses, made reliance on hearsay inevitable. The district court evidently contemplated such a result, stating before trial that it expected the parties to make "liberal use of summary witnesses." J.A. 230. Following this advice, plaintiffs' witnesses submitted lengthy written direct testimony that went well beyond their own personal knowledge. *Cf. United States* v. *Lemire*, 720 F.2d 1327, 1346-50 (D.C. Cir. 1983) (discussing proper use of "summary witnesses" to summarize evidence that has already been admitted), *cert. denied*, 467 U.S. 1226 (1984). For example, nearly 70 paragraphs of the written direct testimony of Netscape's Barksdale, plaintiffs' first witness, contained inadmissible hearsay, often multiple levels of hearsay. Yet the district court denied Microsoft's repeated motions *in limine* to exclude such hearsay. *E.g.*, J.A. 417; J.A. 428; J.A. 555.

Although the absence of any citations to the record in the findings makes it impossible to determine the full extent of the district court's reliance on hearsay, such reliance was inevitable given the way the trial was conducted. For instance, the district court admitted into evidence, and plaintiffs cited in their proposed findings, press comments made during trial by the CEOs of Be and Red Hat to the effect that their operating systems do not compete with Windows. J.A. 9908; J.A. 10641; J.A. 649-50, 724, 729; *see also* J.A. 1613. Consistent with those press stories, the district court found that BeOS and Linux are not viable competitors to Windows. 84 F. Supp. 2d at 23, 24 (FF 49-50, 54). The district court also found that "Microsoft threatened to penalize individual OEMs that insisted on pre-installing and promoting Navigator." *Id.* at 69 (FF 241).

The only evidence offered by plaintiffs in support of that finding, J.A. 836, consisted of multiple levels of hearsay, J.A. 2876-77, 2944, 2948; J.A. 9901; J.A. 9903, to which Microsoft objected, J.A. 417. Furthermore, the district court itself marked as Court Exhibit 1, J.A. 10704; J.A. 7230-31, an op-ed column from the *Washington Post*, which asserted that AOL did not intend to compete with Microsoft in platform software. *Cf.* J.A. 12661; J.A. 12663; J.A. 12670. And, in discussing relief, the district court questioned the parties about a statement attributed to Steve Ballmer, Microsoft's CEO, by *PC Week*. J.A. 9837, 9839, 9853. Indeed, the relief awarded by the district court was based almost entirely on hearsay, particularly the six declarations plaintiffs filed with their proposed decree.

VI.

The District Judge's Public Comments Concerning the Merits of the Case Require That the Judgment Be Vacated and the Case Reassigned to Another Judge.

On June 8, 2000, the day after judgment was entered—but with important post-trial motions still to be heard—numerous news organizations, including the *New York Times*, *Wall Street Journal*, *Los Angeles Times*, *Washington Post*, *Newsweek*, *USA Today* and National Public Radio, began publishing stories based on interviews with the district judge. The district judge apparently started granting press interviews "during trial on the condition that his comments not be used until the case left his courtroom." BRINKLEY & LOHR, *supra* at 6. The *New York Times* described those interviews as "friendly, informal and unstructured" discussions. Brinkley & Lohr, N.Y. TIMES, *supra* at C8.

After entry of judgment, the district judge continued to speak publicly about the case—particularly his decision to break up Microsoft—and about his views of Microsoft's character. On September 18, 2000, the district judge spoke about the case at a conference in Amsterdam sponsored by the International Bar Association. On September 28, 2000, he discussed the case at

an antitrust seminar in Washington, D.C. sponsored by a private law firm. James V. Grimaldi, *Microsoft Judge Says Ruling at Risk*, WASH. POST, Sept. 29, 2000, at E1. On October 2, 2000, he discussed the case during a speech at Dartmouth College. Alison Schmauch, *Microsoft Judge Shares His Experiences*, THE DARTMOUTH, Oct. 3, 2000, at 1. On October 5, 2000, he gave a speech about the case at St. Mary's College of Maryland. Peter Spiegel, *Microsoft Judge Defends Post-Trial Comments*, FIN. TIMES, Oct. 6, 2000, at 4. And on October 27, 2000, the district judge spoke at a law school conference on Capitol Hill. *Microsoft Judge Says He May Step Down from Case on Appeal*, WALL ST. J., Oct. 30, 2000, at B4. This Court can take judicial notice of the generally known fact that the district judge has been speaking publicly about the case (to the press and others) as reported in these publications. *See Washington Post* v. *Robinson*, 935 F.2d 282, 291-92 (D.C. Cir. 1991).

The district judge's public comments about the case both during and after trial violated the Code of Conduct for United States Judges. 175 F.R.D. 363 (1998). Canon 3A(6) provides: "A judge should avoid public comment on the merits of a pending or impending action . . . ." *Id*. at 367. The official commentary states: "The admonition against public comment about the merits of a pending or impending action continues until completion of the appellate process." *Id*. at 370. The Code of Conduct is thus clear that "a judge never may discuss the merits of a pending case in a non-judicial forum, especially when he has reason to know that the parties to the litigation may appear before him again for further judgment in the case." *In re Barry*, 946 F.2d 913, 917 (D.C. Cir. 1991) (Edwards, J., dissenting). Because "the proscription against commenting on the merits of a pending case in a non-judicial forum is absolutely unequivocal," *id*. at 917 n.3, the district court's repeated public comments about this case are indefensible. *See also In re IBM*, 45 F.3d 641, 642-43 (2d Cir. 1995) (referring to "newspaper interviews given by

the Judge concerning IBM's activities" as one basis for recusal); *United States* v. *Haldeman*, 559 F.2d 31, 134 (D.C. Cir. 1976) ("It cannot be gainsaid that public comment bearing specifically upon pending or impending litigation is an activity that judges should scrupulously avoid."), *cert. denied*, 431 U.S. 933 (1977).

Such comments are grounds for disqualification under 28 U.S.C. § 455(a), which requires a judge to "disqualify himself in any proceeding in which his impartiality might reasonably be questioned." Indeed, the district court recently stated that he would consider recusing himself if this Court does not affirm his ruling. *Microsoft Judge Says He May Step Down from Case on Appeal*, WALL ST. J., *supra* at B4. The test under Section 455(a) is an objective one, requiring disqualification if there is an appearance of partiality. *See Liljeberg* v. *Health Servs. Acquisition Corp.*, 486 U.S. 847, 860, 865 (1988); *United States* v. *Microsoft Corp.*, 56 F.3d 1448, 1463 (D.C. Cir. 1995). The proscription against public comments on the merits of a pending case "is so straight-forward and unequivocal under the Code of Conduct that its breach will almost always give rise to a legitimate claim of disqualification under section 455(a)." *In re Barry*, 946 F.2d at 917 (Edwards, J., dissenting). As Chief Judge Edwards stated:

> The integrity of the judicial process would be seriously doubted if judges were free to air their views on pending cases outside of the appropriate judicial forum. Whenever such an occurrence arises, a judge should recuse himself to protect the sanctity of the judicial process. It does not matter whether the judge intends to act with bias or otherwise to prejudice the defendant. What matters is that there has been a breach of a code of conduct by an officer of the court such that the integrity of the process has been called into question. That is enough to warrant recusal.

Id. at 917-18 (footnotes omitted). Simply stated, "[a] judge should be above the fray; he or she should not be influenced by, or appear to be caught up in or contribute to, public clamor." *In re Charge of Judicial Misconduct*, 47 F.3d 399, 400 (10th Cir. Jud. Council 1995). By repeatedly commenting on the merits of the case in the press, the district judge has cast himself in the public

eye as a participant in the controversy, thereby compromising the appearance of impartiality, if not demonstrating actual bias against Microsoft.

In fact, the district judge's remarks reveal sufficient antagonism toward Microsoft to "cause an objective observer to question [the judge's] impartiality." *Liljeberg*, 486 U.S. at 865. For example, in discussions with the *New York Times*, the district judge reportedly analogized Microsoft's executives to "drug traffickers" caught on telephone wiretaps. BRINKLEY & LOHR, *supra* at 6. He also repeatedly attributed his decision to impose structural relief to what he described as Microsoft's "intransigence." *E.g.*, Grimaldi, WASH. POST, *supra* at E1. And he impugned Microsoft's chairman, stating: "Bill Gates is an ingenious engineer, but I don't think he is that adept at business ethics." Spiegel, FIN. TIMES, *supra* at 4. Lastly, the district judge discussed his personal views on the merits of the case, including such matters as product integration (*e.g.*, taking issue with Justice O'Connor's statement in *Jefferson Parish* that cameras are a single product, BRINKLEY & LOHR, *supra* at 263) and his reasons for breaking up Microsoft.

In *United States* v. *Cooley*, 1 F.3d 985, 995 (10th Cir. 1993), the court held that a district judge should have disqualified himself under Section 455(a) because of a single appearance on the television program *Nightline*. The judge's statements in *Cooley* were, if anything, less objectionable than the remarks at issue in this case. After entering an injunction barring protesters from blocking access to an abortion clinic, the judge in *Cooley* appeared once on *Nightline* to emphasize that his injunction would be enforced. *Id*. at 995. Stressing that the judge deliberately chose "to appear in such a forum at a sensitive time to deliver strong views on matters which were likely to be ongoing before him," the court concluded: "[A]t least after the judge's volunteer appearance on national television to state his views regarding the ongoing protests, the protesters, and his determination that his injunction was going to be obeyed, a reasonable person

would harbor a justified doubt as to his impartiality in the case involving these defendants." *Id*. To remedy the violation of Section 455(a), the court vacated each defendant's conviction and sentence and remanded the case for a new trial before a different judge. *Id*. at 998.

The district judge here deliberately chose to discuss the merits of the case in public, expressing strong personal views about Microsoft and its executives in person, in print and on the radio, both during and after trial. Indeed, some of his remarks suggest that he may have pre-judged the central issue in the case—tying—in advance of his liability ruling. *Cf. Cinderella Career & Finishing Sch., Inc.* v. *FTC*, 425 F.2d 583, 591 (D.C. Cir. 1970); *Texaco, Inc.* v. *FTC*, 336 F.2d 754, 759-60 (D.C. Cir. 1964), *vacated on other grounds*, 381 U.S. 739 (1965). The district judge's decision to discuss repeatedly the merits of the case in public, and thereby flout the Code of Conduct's clear proscription, is all the more egregious because this Court has already admonished him for expressing views on a pending case outside a judicial forum. *See In re Barry*, 946 F.2d at 40. Likewise, the district judge's apparent decision to read letters he received from the public during trial, some of which he described as "thoughtful pieces by people who were vitally interested in the case," Sarah Jackson-Han, *Father in Law*, DARTMOUTH ALUMNI MAG., Nov./Dec. 2000, at 44, was a flagrant violation of Canon 3(A)(4) of the Code of Conduct. *Microsoft*, 56 F.3d at 1464.

The district judge's violations of the Code of Conduct are emblematic of the manner in which he conducted the entire case—employing improper procedures and changing the rules of the game, always to Microsoft's detriment. To preserve the appearance of justice, should any of plaintiffs' claims survive review, the Court should vacate the judgment as to those claims and remand for a new trial before a different district judge.

CONCLUSION

The Court should reverse the judgment below and direct the entry of judgment for Microsoft. As to any aspect of the judgment not reversed, the Court should vacate and remand the case to a different district judge for a new trial.

Respectfully submitted,

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